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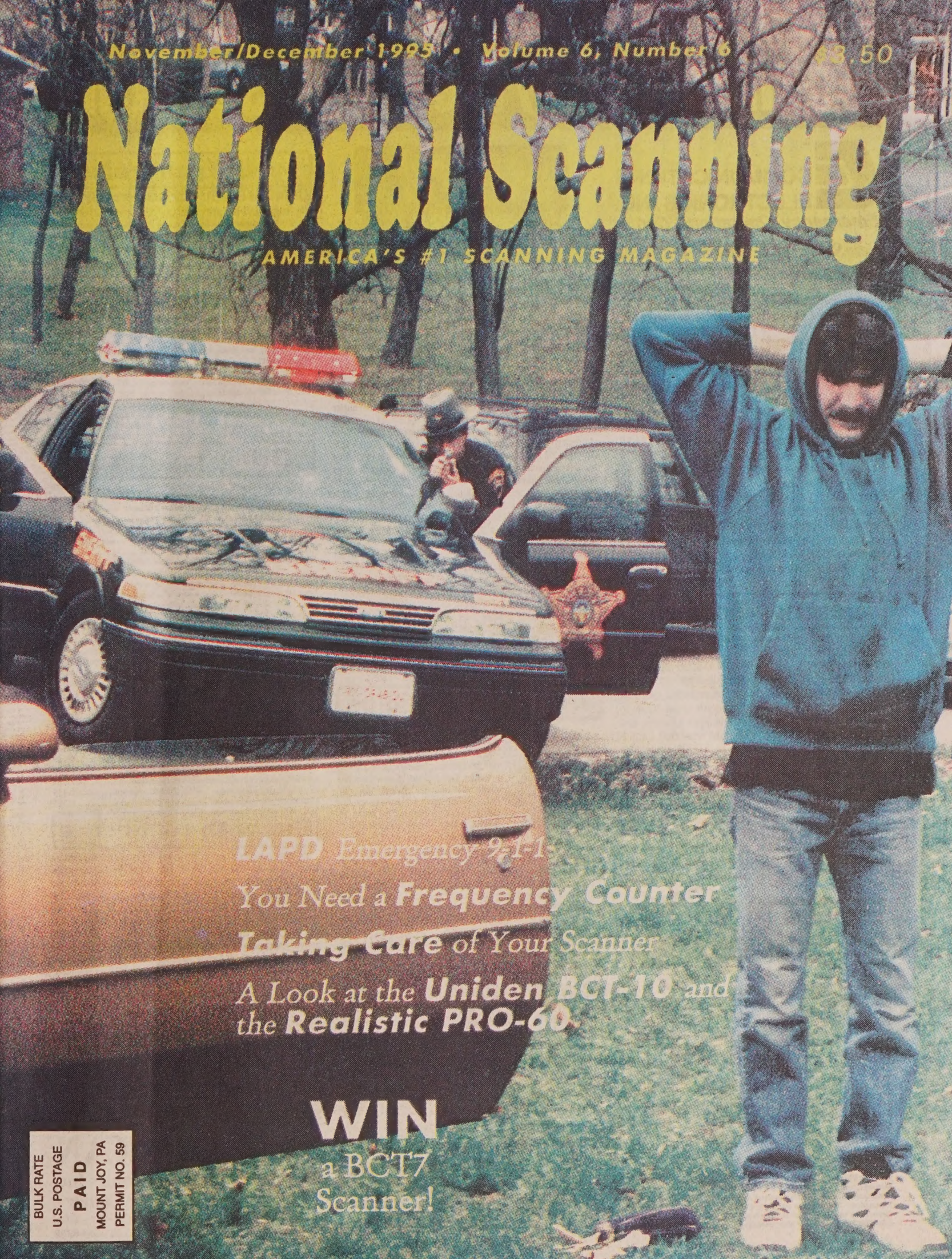
National Scanning

AMERICA'S #1 SCANNING MAGAZINE



LAPD Emergency 9-1-1

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Scanners/CB/Weather Stations

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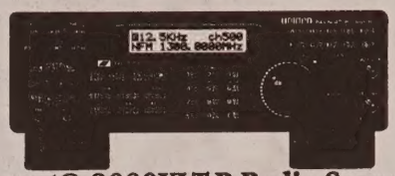

Bearcat® 9000XLT-R Radio Scanner

Mfg. suggested list price $769.95/CE Special $374.95
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Auto Store · Auto Recording · Reception counter
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The Bearcat 9000XLT gives you pure scanning satisfaction with amazing features like TurboSearch™ to search VHF channels at 300 steps per second. This base and moble scanner is ideal for surveillance professionals because it has a selectable attenuator to help eliminate annoying intermodulation from adjacent frequencies in highly populated areas and selectable AM, Wide FM and Narrow FM modes that allow you to change the default receiving mode of the BC9000XLT. Other features include ***Auto Store*** - Automatically stores all active frequencies within the specified bank(s). ***Auto Recording*** - This feature lets you record channel activity from the scanner onto a tape recorder. **Hi-Cut filter** to help eliminate unwanted static noise. You can even get an optional ***CTCSS Tone Board*** (Continuous Tone Control Squelch System) which allows the squelch to be broken during scanning only when a correct CTCSS tone is received. For maximum scanning enjoyment, order the following optional accessories: **PS001** Cigarette lighter power cord for temporary operation from your vehicle's cigarette lighter $14.95; **PS002** DC power cord - enables permanent operation from your vehicle's fuse box $14.95; **MB001** Mobile mounting bracket $14.95; **BC005** CTCSS Tone Board $54.95; **EX711** External speaker with mounting bracket & 10 feet of cable with plug attached $19.95. The BC9000XLT comes with AC adapter, telescopic antenna, owner's manual and one year limited warranty from Uniden.

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WTA13G-R Push-to-talk mini-VOX headset for GMRS210+3 ... $79.95
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Uniden WASHINGTON-R SSB CB Base $199.95
Uniden GRANTXL-R SSB CB Mobile $139.95
Uniden PRO538W-R CB & Weather $59.95

VHF Transceiver

RELM® WHS150-R Transceiver/SPECIAL

Mfg. suggested list price $481.67/CE price $299.95

Police and fire departments depend on the RELM WHS150 transceiver for direct two-way communications with their police, fire department, civil defense agency or ham radio repeater. The WHS150 is our most popular programmable five watt, 16 channel handheld transceiver that has built-in CTCSS, which may be programmed for any 39 standard EIA tones. Frequency range 148.000 to 174.000 MHz. Will also work 144.000-148.000 with slightly reduced performance. The full function, DTMF compatible keypad also allows for DTMF Encode/Decode and programmable ANI. Weighing only 15.5 oz., it features dealer programmable synthesized frequencies either simplex or half duplex in both 5.0 and 6.25 KHz. increments. Other features include scan list, priority channel, selectable scan delay, selectable 5 watt/1 watt power levels, liquid crystal display, time-out timer and much more. When you order the WHS150 from Communications Electronics Inc., you'll get a complete package deal including antenna, battery, belt clip and user operating instructions. Other accessories are available. A leather carrying case with swivel belt loop part **#LCWHS** is $49.95; rapid charge battery charger, part **#BCWHS** is $69.95; speaker/microphone, part **#SMWHS** is $54.95; extra ni-cad battery pack, part **#BP007** is $59.95. The radio technician maintaining your radio system must order programming instructions part **#PI150** for $18.00 to activate this radio. FCC license required for United States operation.

Other neat stuff

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WB-R USA Today The Weather Book, Guide to USA weather by Jack Williams $15.95
PSUN-R Partly Sunny, Weather Junkie's Guide to Weather by Alan Fields $11.95
Soundtronic AC101-R digital portable shortwave – 20 memory $39.95
Grundig Satellit 700-R digital portable shortwave with 512 memory $459.95
Grundig Yacht Boy 400-R digital portable shortwave – 40 memory $179.95
Grundig Yacht Boy 230-R portable shortwave receiver $109.95
Sangean ATS800-R portable 20 memory shortwave receiver $69.95
Sangean ATS803A-R portable shortwave w/AC adapter – 9 memory $129.95
Sangean ATS808-R portable 45 memory shortwave receiver $149.95
Uniden EXP9200-R 900 MHz. 1 or 2 line spread spectrum cordless phone . $289.95
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SNI ID200-R Bouncer name/number caller ID, call reject, forward $89.95
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From the New Editor
Greetings!

With this issue I begin the role of editor of National Scanning. As we share the fun of scanning, it is my hope that we will establish a strong friendship. It is my goal to serve your needs as we move along with the ever changing world of scanning. Please let me take a few moments as I tell you a little about myself and my goals for *National Scanning*.

How It Began for Me

Each evening as I visited my neighbor, I would take a few minutes to listen to the "police calls." Little did I dream that the desire to listen to the world of two-way radio would last for thirty years. The year was 1965 and the concept of monitoring was basically unheard of. My first receiver was a Lafayette HA52A tube type tunable high band receiver. I spent my evenings listening to Monroe County Sheriff, KEA898, on 159.210.

Later I added two Salch Tunaverters for low band and for high band. My first portable was a Listen-In converter that sent calls on a single frequency into my AM radio. In the years to come I would go through many receivers which would lead to my current array of scanners and monitors.

Today my monitoring is done with equipment I didn't even dream of back in 1965. Base scanning is accomplished with a Uniden 760XLT with tone board, a Bearcat 300, a Realistic 200, a Realistic 2006, and a Uniden 210XLT. Mobile scanning is accomplished with a Uniden 560XLT. Handheld listening takes place on a Uniden 200XLT, two RXD single channel receivers, a Realistic PRO-42, and an Alinco 580 ham radio. Reception is greatly helped with Diamond RH77CA antennas. My location allows reception from 22 counties. In addition, I actively pursue skip in various forms.

A Personal Brief

My home is in Mount Morris in Western New York. My wife, Melissa and I share the joy of raising our

children Erica, 4-years old and Jessica, 2-years old. For 14 years I have had the privilege of serving listeners at the electronics counter of Christiano Hardware in Leicester, New York. While there I set up thousands of scanners ranging from the simplest crystal scanner to alpha/numeric scanners. I cherish the many friendships I have made there over the years. The levels of scanner involvement are as varied as the scanner listeners themselves.

For the last few years I have had the privilege of writing the Western New York column for NorthEast Scanner News. Through this role I have met even more scanner listeners. To serve the needs of scanner listeners in my area I wrote *Scanner Radio Data* with second edition sales of over 1800 copies. Now I'm preparing the third edition which will cover Western and Central New York as well as the Adirondack Mountain region.

From this work I have come to learn the various interests, questions, and needs of scanner owners. In addition to my new role as your editor, I sell two-way radios to business and public safety users. This involvement gives me additional insight into the ever changing world of radio communications.

For scanner listeners that share the world of ham radio my call is N2OPS. I am active on two meters and on six meters. Be sure to listen for me when the six meter band is open. I will usually be on 52.525 simplex or the Rochester repeater 53.63 with an input of 52.63. In addition to wearing the hats of editor and two-way radio salesman, I am director of On The Road Youth Ministry. This Bible-based outreach serves children and teens in two counties of Western New York.

LETTERS

With Jim Sutton

Looking Ahead for National Scanning

As we grow, we want to meet the needs of scanner listeners from the beginner to the most advanced. Some series I have upcoming include: "Meet the Pros," "Scanners at Work," "The Bands," and "Scanning Vacation Spots." We plan to look at the history of scanning as well as listening before scanners. Another article will cover unusual scanners. And we will be taking you behind the scenes to repair facilities and manufacturers.

Your chance to help us plan will be coming soon in the form of a survey sheet. Please be keeping notes at your monitoring post on how we can best serve your needs.

In preparation for the 2nd Annual National Scanning Convention, I will be writing an in-depth article on scanning in Lancaster County, Pennsylvania. Please send me your frequencies, codes, unit numbers, etc. for this article. Now that we're on the topic of the National Scanning Convention be sure you get your reservations in now. This is a great way to combine your family vacation with your hobby. For a Lancaster County map and information packet call 1-800-735-2629. It's free!

One Final Note

With the holidays coming up remember that *National Scanning* makes a great gift. Send a subscription to a friend. Call 1-800-423-1331 to order!

Looking forward to a great friendship.

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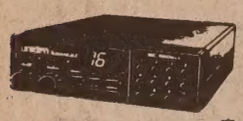
SCANNERS



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50 CH 12 BANDS

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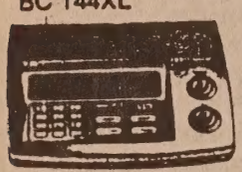

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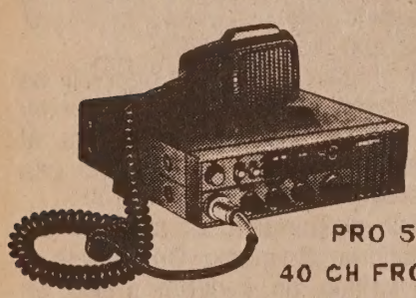

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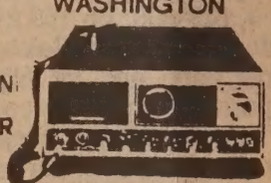

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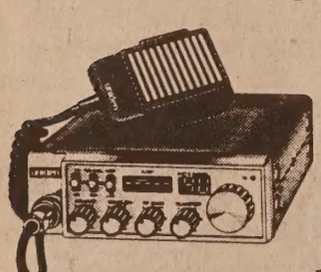

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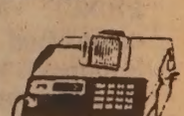

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You Never Know What You'll Hear on a Scanner

A Montgomery County, Washington, man is more than lucky to be alive after he was buried under a pile of trash at the local dump. The 48-year-old man, an employee at the dump, was accidently buried when a front-end loader dropped its load on him. He remained buried for more than an hour before he used his two-way radio to call co-workers for help. The county Collapse Rescue Team responded and freed the man. He was taken to a hospital, treated and released.

• Monitoring Prince George's Fire It was a standard kitchen fire. Food began burning on the first level of a two-story townhouse in Prince George's County, Maryland. But when firefighters arrived on the scene, they ended up fighting each other instead of the fire. An argument broke out between paid and volunteer members of the department. Who should be first to carry a hose into the burning building? Before long, a full-scale brawl had erupted. Two paid firefighthers and six vounteers were suspended. Oh, and what about the house? The blaze was extinguished after 20 minutes. No charges were filed by police who reported that "all we did was clear it out."

• Scanner Listener Thwarts Murder? A Florida man charged with plotting to kill his stepson after a neighbor taped his incriminating cordless phone calls may walk free. In April, the Florida Supreme Court ruled that cordless phone users have an expectation of privacy, giving Michael Von Smith some legal ground to stand on. Smith's attorney asked the court to suppress the tape of the call and all testimony related to it. Judge Diana M. Allen agreed and ruled in Smith's favor. Assistant State's Attorney Dan McClain says the case is not over, however. The ruling does not affect other conversations between Smith and alleged hit man Bradley McNeil. "It's weaker than it was, but there is still a case there," said McClain.

• Chatty Burglars Three teenagers who broke into a landscaping company's offices and stole three portable radios were caught shortly after when police heard the radio calls and recognized the thieves' voices. "They weren't exactly rocket scientists," a police official said. The three teens in Ephrata, Pennsylvania, stole the radios from Martin's Landscaping, ran into a cornfield and then headed home, chatting on the radios all the way. When police and business owners checked the business to see what was missing, they heard the youths using the two-way radios. Police recognized the boy's voices and went to their homes, where they found them still talking on the radios. The youths were arrested on charges of burglary, theft and criminal trespass.

• Undercover Crook Police in Oxnard, California are on the lookout for a man who uses a scanner in his escapades. Apparently, the man hears of an incident on his scanner. He waits a while and then goes to the scene posing as an undercover cop and saying that he had just come by to check on things. In one case he reportedly asked the clerk to go to the back of the store and check on things. While the clerk was gone, he emptied the cash drawer. Sheriff's Sgt. Keith Lazz said that "the guy was listening to a scanner. He hears there's a problem and he goes there to take advantage of it."

Reader's Report
Reader's Report
Reader's Report

• Fire Radio Static
Firefighters in Kansas City, Missouri are criticizing the city's new emergency radio system, saying that flaws could endanger the lives of firefighters and police officers. The $18 million 800 MHz radio system has had problems, ranging from repeated failures of handheld radios and blocked signals within buildings, to failure of alarms to sound at area fire stations. "It is a con-

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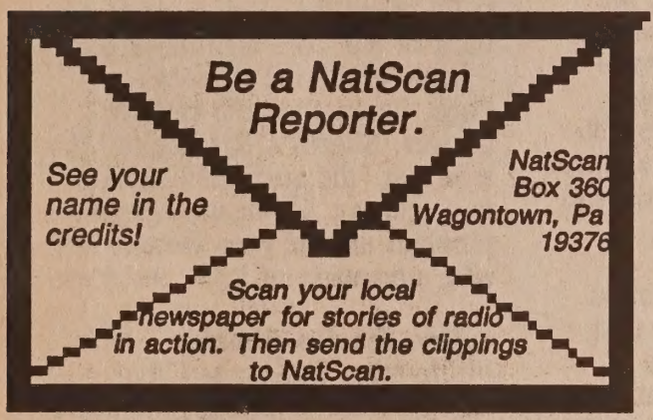
stant day-to-day problem and it's going to get one of us killed," said firefighter Chris Gussman. "We've got to be able to communicate." City officials said that they are working with Ericsson, Inc. to solve the problems, which have cost the city a repair tab of nearly $1 million.

• ***Lookie-Loo Gets Clipped*** A Jacksonville, Florida man who repeatedly showed up at the scene of police calls was arrested and charged with illegally monitoring police radio traffic. Forty-one year-old David Randall Boyd, a self-employed window washer, violated a city ordinance that prohibits monitoring police from a motor vehicle or business. Monitoring from a home is still permitted. Police responding to a burglar alarm spotted Boyd's scanner mounted in his car. They also saw a 5-inch TV screen mounted on the dash, which is a traffic violation. Boyd was released upon posting bail.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19376
Scan your local newspaper for stories of radio in action. Then send the clippings to NatScan.

• ***The Ultimate Crank Call*** Donna Graybeal's phone would ring every 90 minutes, day and night, like clockwork. It did it 2,688 times. Something was wrong. The Massachusetts resident would answer, only to hear what sounded like a rush of air, a click, then a dial tone. "It drives you absolutely out of your mind," Graybeal told reporters. "I thought, talk dirty to me. Do something. This silence is driving me crazy." Finally she called police, who traced the calls to the Potomac, Maryland home of Theodore and Elisabeth James. But, the James' weren't making the calls. An oil tank in their basement was doing the dialing. Old and unused, the tank had been equipped with a device that automatically dials the oil company whenever the fuel runs low. "Poor Donna had been harassed for months by our oil tank," said Elisabeth James. Bell Atlantic officials called it strange and unprecedented. Steuart Petroleum said the redialer was a short-lived test eight years ago, which was discontinued. Nobody knows what brought the autodialer to life.

• ***More Federal Hocus Pocus*** I'm from Washington and I'm here to help. Yes, the FCC is changing the Refarming Rules Again. The FCC, attempting to make more efficient use of the radio spectrum below 800 MHz, recently established a narrowband channel plan based on current channel centers. Channels will be listed every 7.5 kHz within the 150-174 MHz band and every 6.25 kHz within the 421-430 MHz, 450-470 MHz and 470-512 MHz band. The transition plan for equipment has been helped along with the adoption of a plan in which users will not be required to replace their existing systems. Only narrowband equipment will be type-accepted over the next ten years. By August 1, 1996, new equipment must be type-accepted for 12.5 kHz or less channels, or on 25 kHz channels for narrowband efficiency. By January, 2005, new type-accepted equipment must be designed to operate on channels of 6.25 kHz or less or on channels up to 25 kHz for narrowband efficiency.

Reader's Report
Reader's Report
Reader's Report

• ***USCG Station Shutdown*** The United States Coast Guard is expected to close its Marshfield, Massachusetts station next year after 52 years of continuous operation. The Marshfield station provides communications for Coast Guard and private vessels on the high seas. The receivers, antennas and other equipment will be moved to Otis Air National Guard Base in Bourne, and 20-25 Coast Guardsmen will be reassigned there to maintain the equipment. "There will no loss of services...everything we do will be done remotely," said LCDR Kurt Guth, the station's commanding officer. Operations at Marshfield include fax weather bulletins and navigation information as well as monitoring of distress calls from vessels at sea.

Many thanks to: John Ward, Brandon, FL; Michael J. Sandor, Monroe, NY; Robert E. Thomas II, Bridgeport, CT; Bob Fraser, Cohasset, MA; Jack McCartan, Newark, DE; Pete Romeika, Rosemont, PA; Maryanne Kehoe, Atlanta, GA; W5YI Report; Denny Murr, Mountville, PA; George Beard, Kansas City, KS; Tom Hodge, Jacksonville, FL; Louis Campagna, Philadelphia, PA; Oliver Cooney, Jenkintown, PA; Charles D. Gossett, Nashville, TN; David McBeth, Amesbury, MA

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"Nine-one-one emergency"

A Crash Course on LAPD Communications

by Gene Hughes

It's approaching midnight. I'm eighty feet below street level, sitting next to Rich Cowgill, who has been answering the telephone for almost six hours.

"Nine-one-one emergency"

"Get someone over here and get this woman out of my place before I hit her again." Sound of a woman crying in the background.

"Is she hurt? Do you need an ambulance?"

"No, she's OK."

"Is this your girlfriend?

"She was."

"Is this your apartment?"

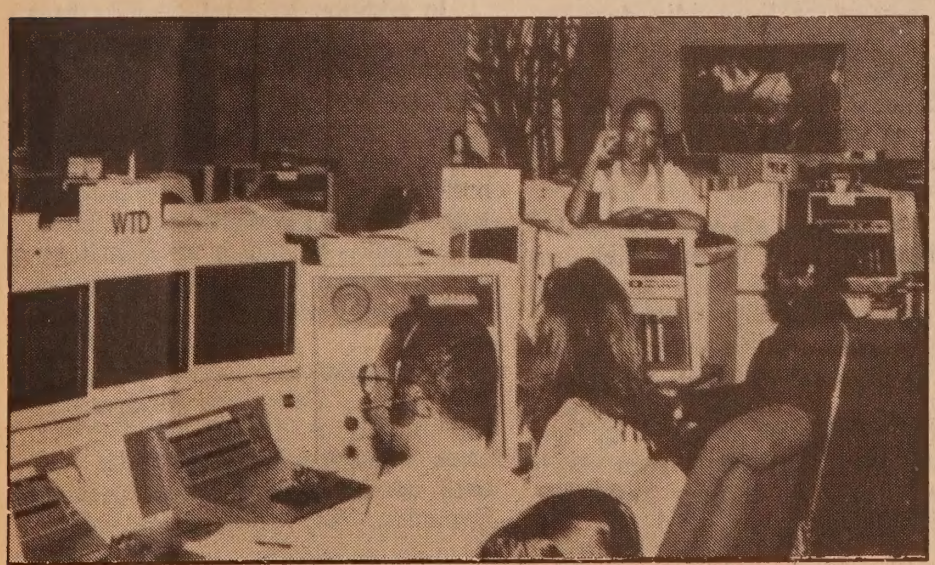
"Yes."

"Alright. The police will be there in a couple of minutes." I don't even notice that the caller has been disconnected until I hear Rich's monotone: *"Any West LA unit to handle, domestic violence, Code two high, Incident 5134, RD 895. 8Z4 to handle, roger."*

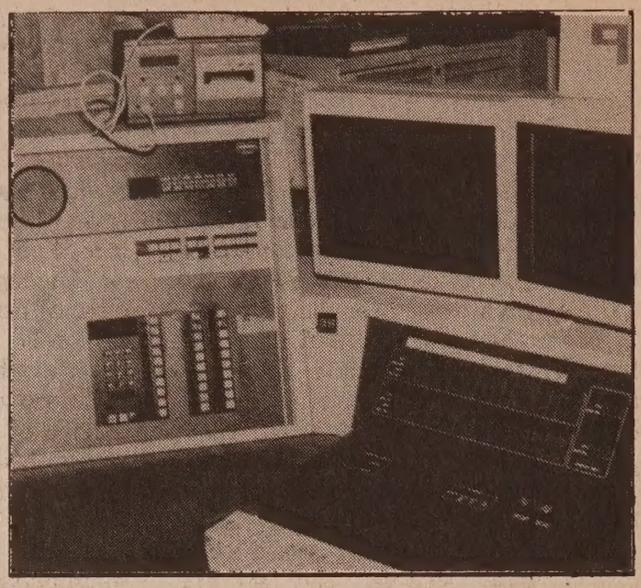
Less than an hour before, I'd been met at the street level entrance by Cathy Bushey, Senior Police Service Representative. (If you think you've heard the name "Bushey" before, you've probably watched the O.J. Simpson trial. Her husband, Police Commander Keith Bushey, was the senior officer who instructed the detectives to notify O.J. Simpson in person.) Her title is bureaucratese for "supervisor." Petite and demure, Cathy's demeanor imparts no clue to the tremendous responsibility she has. As we wound down the spiral driveway, massive cracks in the wall demonstrated the work of the 1994 earthquake (this is definitely one place I would not have wanted to be at 4:21 am on January 17, 1994). Past Security and the Watch Commander's office, we entered the large room whose only furniture is row upon row of radio consoles, 54 to be exact. Cathy informed me that the Communications Division of the Los Angeles Police Department employs four hundred people, and I noticed that most are women.

Cathy introduced me to Rich. Both were once police officers in nearby suburban communities: here, they are civilian employees. Rich bears a strong resemblance to TV star John Ritter. It turns out that we have a lot in common. Among other things, he is a radio and scanner buff, and an alumnus of UCLA. He had given me a telephone handset so that I could monitor and now between answering calls, he's giving me a crash course on LAPD communications.

Here in the depths of the building known as City Hall East, the heart of the Los Angeles Police Department



An overview of some of the consoles for the west bureau. Shown are the West Los Angeles console (WLA), West Traffic Division (WTD), and the Bureau Communications Coordinator (BCC4) for the West Bureau



Console Identification. The panels between the computer keyboard and the two computer screens are the transmit frequency indicators and manual selectors. The device atop the console is the TDD receiver for the speech impaired. Below, to the right of the speakers are controls for the instant playback from the 20 minute recorder. Below that are the one-touch instant dial buttons for emergency agencies like fire, Calif. Hwy. Patrol. etc. The bottom half has telephone dialing for non-emergencies

pumps out the never-ending stream of radio messages. By the time his shift is over, Rich will have answered over two hundred calls. Half are from citizens dialing 9-1-1: the rest come in via the department's seven-digit number. Calls fall into four general categories:

- Civil matters that are not the province of the Police or Fire Department.
- Nuisance calls from drunks, youthful pranksters and the mentally ill.
- Non-emergency situations that require police or fire response.
- Emergencies such as crimes in progress, fires and medical problems.

Callers with non-police problems are directed to the proper agency. Mischief calls coming from a residence are marked for investigation. Youthful callers and their parents are warned that any more such calls will be dealt with in a severe manner.

"Nine-one-one emergency."

"I want to report narcotics activity at the corner of Hollywood Boulevard and Vine Street."

Rich winks at me. *"Who are you, sir"*

"This is Captain Johnson, checking in." The caller hangs up.

Rich points to the screen in front of him: *"A psycho. He's calling from a phone booth at least fifteen miles from Hollywood and Vine. Like weirdos who make obscene phone calls to women, there are a few who get their kicks by calling 9-1-1."*

9-1-1 is supposed to be used for emergency calls only, but "emergency" seems to mean different things to different people. To a harried police department, a loud radio at midnight is a minor matter. To a citizen being kept awake, it warrants a complaint to 9-1-1. Only ten to twenty percent of the calls received are true emergencies. Non-emergency calls are transferred to a bank of secondary consoles, informally known as "9-1-2." These calls will be dispatched via the Mobile Data Terminal (MDT) as a unit becomes available. Police handling of non-emergency situations is a major source of citizen complaints. A large segment of the public does not seem to understand how understaffed the LAPD is. Cities like New York and Chicago have over four police officers per thousand population: Los Angeles has slightly more than two officers per thousand.

All the consoles are virtually identical, differing only in how they are programmed. Phone calls for assistance are automatically routed to one of the twelve consoles designated for 9-1-1. Rich is normally an instructor, but tonight he is an Emergency Board Operator (EBO). Since this is an "enhanced" 9-1-1 system, when Rich answers a call, the address and phone number of the calling party is displayed. To dispatch a call, an Incident Form appears on the screen with the incident number (at midnight, incident numbers begin again at "1"). The left screen is showing the units in that area and their status. When the call is a genuine emergency a "hot shot" in LAPD parlance, the EBO is responsible until a unit has been assigned and verified its response.

The Department is divided into four patrol Bureaus, each encompassing a geographical area of the city. In turn, there are four or five Areas (formerly called Divisions) in each Bureau (taxpayers recently rejected a bond issue to fund two additional stations). Radio consoles are grouped by Bureau, with one for each area plus a Bureau Communications Coordinator (BCC) console. An Area console is staffed by a Radio Telephone Operator (RTO) who handles radio messages to and from units in the field. The BCC holds a semi-supervisory position, and is charged with assuring that all calls are dispatched in a timely manner. The BCC's screen lists all undispatched calls, and the BCC may assist in dispatching when it gets hectic. It's a team operation. The BCC can also take over broadcasting a pursuit. At the same time, a supervisor such as Cathy will help by spotting the location on a street map.

"Nine-one-one emergency."

"Habla Espanol?"

"Uno momento." Rich touches a button and the call disappears.

In addition to 9-1-1, 9-1-2, Area and BCC consoles, there are other specialized units. Four consoles are dedicated to Spanish speaking callers. When an EBO answers a call from a person speaking Spanish, a single button transfers the call. For other languages, LAPD dials into the Language Bank. This is a statewide service furnished by AT&T, and offers translators speaking 132 different languages.

Four other consoles are staffed by Auxiliary Telephone Operators (ATO). The ATO will call tow services requested by field units, call back complainants for additional information, etc. The transfer of ac-

tivity from one console position to another is so smooth that the scanner listener may never notice that different operators are involved.

Console functions are pre-programmed. For example, as an emergency call comes in, the operator selects the transmitters that will be used to dispatch the hot shot call. A row of lights below the screens indicate which transmitters will carry the broadcast. A dedicated VHF frequency (154.830) transmits all hot-shots, and is monitored by the air units.

There are buttons everywhere: counting the keyboard, there are probably a hundred and fifty. In addition to the permanent master tape of all conversation, the last twenty minutes are recorded digitally for instant playback at the console. Also, the operator can separately save any part of the stored twenty minutes.

The Fire Department's Communications Center is just across a hall. It's a temporary location, pending completion of the new facility nearby. Brian Humphrey, a Public Information Officer for the Department, has been very helpful to scanner users in the area.

"Nine-one-one emergency."

"My husband's just been shot." "I'm connecting you to the Fire Department. Do not hang up." Rich touches a button that connects the call to a Fire Department operator. Rich stays on the line.

"Fire Department."

"My husband's been shot in the leg."

"Is he breathing and conscious?"

"Yes."

"An ambulance is on the way. Be sure he is lying down. Raise his leg up about 12 inches if you can. Put a clean wet cloth over the wound."

Rich has started an incident report. *"Southwest units and 3A91, a shooting at _____, fire department en route. 3A91 handle code three. RD 396, Incident 5338."* To the caller: *"Ma'am, do you know who shot your husband?"*

"No, it was out in front of the house. There was lots of shots."

"OK." "Southwest units and 3A91, no additional information on the shooting call."

Rich answers my question before I can ask it: "I dispatched our unit 'code three' [red light and siren] because I want police there before the fire department. We don't want any more firemen shot," referring to an incident during the riots. When dispatching the highest priority calls, only one unit is given "code three." This is to prevent accidents caused by two units crashing because they could not hear each other over their sirens.

The eighteen patrol Area units and four Traffic Investigation Divisions are dispatched on twelve UHF frequency pairs. This requires some Areas to share frequencies. The Department has funds and licenses to expand the system to twenty-two dispatch channels. Using strategically placed base stations and satellite receivers, the system is designed to work with field units all using two-watt portable radios. It operates in a repeating semi-duplex mode. Base operators can transmit while field units are talking in, and the base transmissions will override the repeat function.

The four existing tactical frequencies will be augmented with nine additional channels. Currently, special police functions (investigators, juvenile officers, administrators, etc.) share a melange of UHF and VHF frequencies and are dispatched from their own offices. These, too, will have their own new UHF channels. Unfortunately for scanner users, they will be digital. However, it will be some time before all the new frequencies go into use.

"Nine-one-one emergency."

A woman's voice: "I need help. My arms are getting numb. I OD'ed on 'speed.'"

"Don't hang up!" Rich hits the Fire Department button. He stays on the line for my benefit.

"Fire Department."

"Help me. I've overdosed. My arms are numb."

"Can you breathe?"

"It's hard. My chest is too heavy."

"Rescue is on the way. Stay where you are. Don't go away." The last comment because the caller is at a public telephone.

A red light on the wall indicates there are unanswered calls holding. Unofficial estimates are that almost one million(!) calls were never answered last year. There aren't enough 9-1-1 positions, but there's no room to add more. Together with the additional frequencies, Communications will get new centers, one at the new Training Center and one in the Valley area. In the event of a major disaster (read "earthquake") either will be capable of taking over the whole city.

To complement the new frequencies, officers are being issued the new Motorola *Astro* portables. They replace the worn-out eight-channel units now in service. In a drastic change of policy, each officer will be issued his/her own unit, rather than drawing from a pool when going on duty. Each radio transmits its identification number every time the microphone button is pressed. Under the new system, this number will also identify the officer using the radio.

The new radio stirred up considerable controversy. Some people felt that its features were overkill. The Astro is an outgrowth of the Motorola Saber series. Prior to LAPD placing an order, very few systems had been sold. Once LAPD committed, many other departments have followed suit. The seven thousand units for LAPD have a number of non-standard modifications to meet Department requirements.

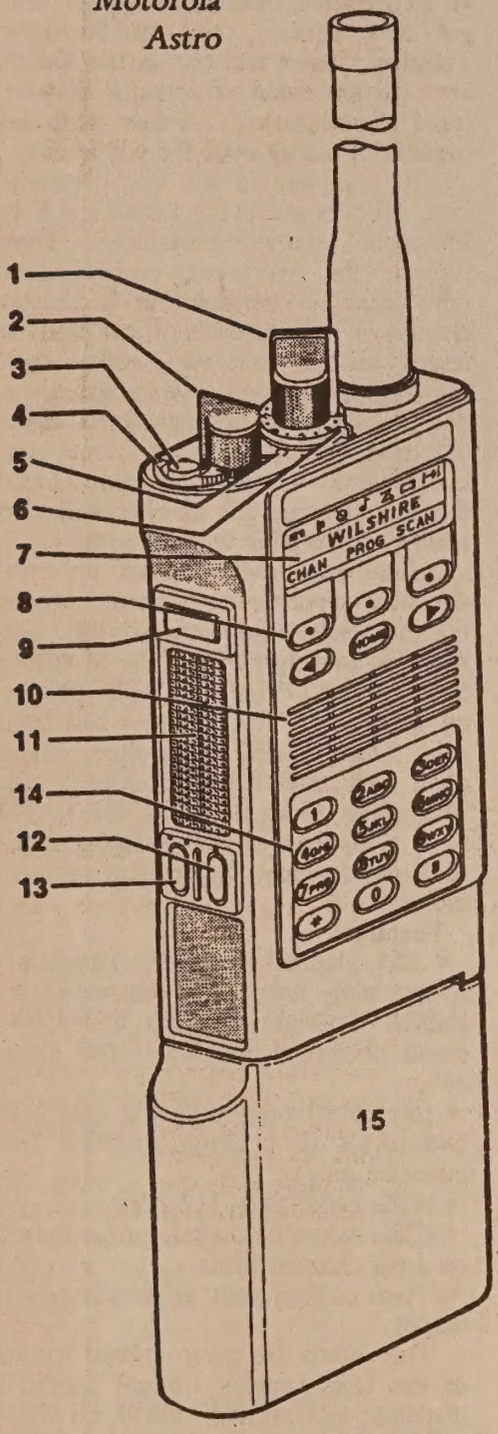
Features:

- 254 channel capacity. Patrol officers will have 150 channels installed. Specialized units and Command personnel will have 180 channels.
- 16-channel programmable scan with two levels of priority (installed frequencies only).
- Wide band: 450–512 MHz.
- Clear voice or digital, programmed on a per channel basis.
- Two- or four-watt selectable power output.

The radios are programmed for all of the Los Angeles County Sheriff's dispatch, tactical and mutual aid channels and the frequencies for every nearby law enforcement agency operating in the UHF band. A formal agreement allows LAPD officers to contact the Sheriff's Radio Center in emergency situations. Protocols have been established for working with nearby cities and agencies.

If an Astro is held to one ear, and a scanner or old radio is held to the other ear, there is a barely noticeable delay in the Astro's audio. This is be-

The new Motorola Astro



cause the audio goes through circuitry that determines if the signal is clear voice or digital. Receiver switching is automatic.

The functions of the various controls and displays are as follows:

1. Pre-programmed frequency selector switch with the sixteen most frequently used channels.

2. On-off and volume control.

3. Emergency "trigger" button.

4. Select clear voice or digital transmit.

5. Red transmit LED. If the battery is low, this LED will blink.

6. Select repeater or direct (simplex or duplex).

7. Displays. The top row contains icons that indicate the status of various functions. From left to right: The little square blinks to indicate low battery; the little speaker lights up when the unit is in carrier-squelch (no CTCSS) mode; The musical note lights when the "beep" is enabled; The "Z" indicates when the unit is scanning; the white square indicates various modes of programming; The arrow lights when the unit is in the direct (simplex) mode.

The center section is a fourteen segment LCD display. Normally, it shows the selected channel in alphanumeric form (in the illustration, the unit is tuned to the Wilshire Area dispatch channel). It also displays other functions in programming.

The bottom section is also an LCD display, divided into three sections of four segments each. Various menus can be scrolled into the three sections: CHAN ("channel"), PROG ("program"), SCAN, PWR ("power output"), VIEW, and MUTE. After a menu is selected, these segments display choices. For example, if MUTE is selected, "ON" will appear in one segment, and "OFF" in another. Menus are chosen and options selected by the buttons located just below.

8. Five of the six buttons select the menus and functions. The top three buttons control the displays located just above them. Pressing a button chooses the menu and then the choices that appear. The "HOME" button returns the unit to its home channel; or, when a new channel has been selected, locks it in.

9. This button lights the display for ten seconds.

10. Speaker and microphone.

11. Push-to-talk switch.

12. Monitor switch defeats the CTCSS (PL).

13. Same as the "lock-out" button on a scanner.

14. Keypad. Used to select channels or program a special "soft ID."

15. Battery.

"Nine-one-one emergency."

"One of your officers is fighting with a man out in the street in front of my house."

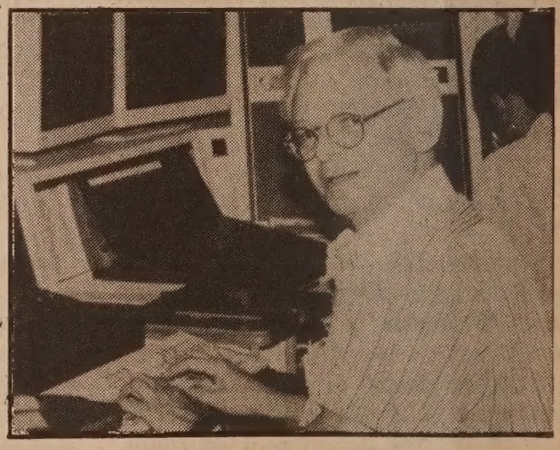
"Is the officer in uniform?"

"Yes. He was on a motorbike."

"All units, citizen reports officer needs help, 17A1 handle code three, other units code two high. Incident 5691." An "officer needs help" call has the highest priority of all. Rich remains on the frequency until two patrol units arrive at the scene and report "code four" (no further assistance needed).

It's midnight, and during the average day that just ended, this Department received over thirteen thousand telephone calls. Nearly six thousand Incidents have been dispatched. Rich invites me to stick around for a while, and I accept. It never gets boring, and I return a few days later with my spouse, Mitzi, to take some pictures. She gets hooked, too.

One thing is certain: After these visits, my scanners just won't sound the same when I listen to my new friends.



Gene Hughes at the console

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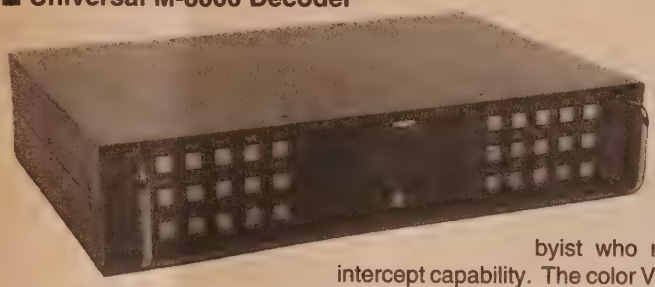
SOPHISTICATED MONITORING EQUIPMENT FROM UNIVERSAL

■ Universal M-8000 Decoder



The professional-grade M-8000 was designed primarily for the military, commercial and diplomatic user, but can be used by the hobbyist who requires maximum intercept capability. The color VGA output includes a spectral display and simulated tuning scope plus five tuning bars. Modes currently include: **CW, Baudot, SITOR A & B, ARQ-M2 & M4, ARQ-E & E3, ARQ6-90, ARQ-S, SWED-ARQ, FEC-A, FEC-S, ASCII, Packet, Pactor, Piccolo, VFT, ACARS, POCSAG** and **GOLAY**. Plus display modes for: Russian Cyrillic, Literal and Databit analysis mode. Breathtaking **FAX** images to VGA monitor or printer. 115/230 AC 50/60 Hz. Please contact Universal for full specifications on this military grade device. Monitor optional. *#0085* **$1349.00** (+shipping)

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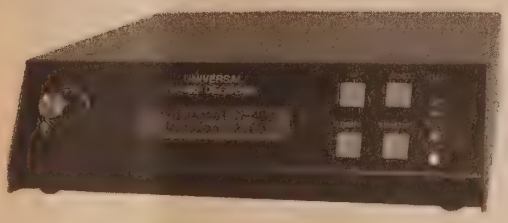

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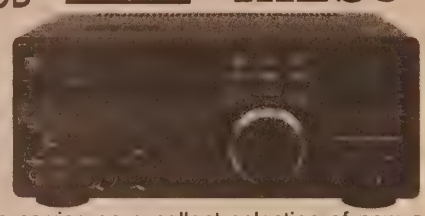

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What Do Mark Swarbrick and the New Uniden BCT-10 Have in Common?

By Larry Miller

Whenever I go anywhere with Mark Swarbrick, he always brings his scanner. We'll be driving along, talking, and out of nowhere he'll announce, "There's a speed trap up ahead about three miles." And sure enough, as the odometer rolls off another three miles, there's a speed trap. Mark doesn't use a radar detector. He uses a scanner. The man has saved me thousands of dollars in fines.

Uniden calls the new BCT-10 a "Highway Information System" and it's a combination scanner and radar detector – kind of like Mark.

The BCT-10 isn't a radar detector in the traditional sense, however. In fact, it's not a radar detector at all. Better let me explain.

The BCT-10 is a fully pre-programmed scanner. With the touch of a button, the BCT-10 will automatically search for active police frequencies in the VHF Low (37.02 to 46.02), VHF High (138.3450 to 172.0200) and UHF (423.000 to 508.4875) bands. There's no keypad for entering individual frequencies. You just set the state (or Canadian Province) and the scanner will do the rest.

What makes the BCT-10 a kind of "super scanner," is what Uniden calls the "Highway Patrol Alert." It's a lot like a radar detector and here's how it works. When a highway patrol officers step away from their vehicles, signals from their car radio are sent to their portable radios by what's called a mobile extender. The mobile extender is both a transmitter and receiver that operates on its own frequency. When you are within three miles of a highway patrol unit and a mobile extender is in use, the BCT-10 picks it up and triggers an audio and visual alarm. The strength of the signal is displayed, giving you an idea of how far away the speed trap is located.

BCT-10 is one of the smallest scanners I've ever seen. It's so small that it can be mounted either on the windshield or on the visor so that the front panel is visible to the driver. The unit comes with two antennas. The first is a standard "rubber duckie" and the other a wire that you run along the windshield. The whole package looks very much like a radar detector.

Another helpful feature is the BCT-10's "instant weather." As you travel, all you need to do to get the latest, up-to-date forecast is to reach up and hit a button. All of this is contained in a tiny 5 3/8 x 3 x 1 1/4 inch package. Uniden bills this as "The World's Smallest Mobile Scanning System."

With radar detectors now illegal in trucks, I've got a feeling Uniden is going to sell a lot of BCT-10s to long-haul drivers. With its combination of "Highway Patrol Alert" and scanner, I have a feeling that the general public is going to like this one, too. By encouraging safe driving and helping drivers avoid speed traps, the BCT-10 will pay for itself in no time flat. It's going to save a lot of people a lot of money.

The BCT-10 Highway Information System is available from your favorite scanner dealer for a suggested price of $289.95. Tell them that *National Scanning* sent you.

The Care and Feeding of Your Scanner

Our scanners are major investments which can be used to their fullest potential by observing some simple guidelines. In many ways our new scanners are like newborns and used scanners can be viewed like the adoption of a child.

Prenatal Care

Just like childbirth class it is essential to read the instruction manual. It would be impossible to fully appreciate your soon-to-arrive scanner without reading all the manufacturer has planned for it and all it is capable of.

The Delivery Room

Just like a proud parent the owner of the scanner is beaming with excitement and anticipation. It is scary to be a new parent as it is indeed a new world. Even the parent with other children needs skill in adjusting to the personality and temperament of the new arrival.

As a parent-to-be, I remember seeking advice from other dads on their experience. This can go for the new scanner owner as well. Your dealer can help you in the preparation for that special day.

Then the big day arrives. If that scanner is an expensive one there may be sounds from the wife similar to the arrival of your first child. The emotion is at it's peak as you open the carton and you unwrap the packaging, just like cutting the umbilical cord. You plug the scanner in and it makes it's first cry. Then you remember something the real baby didn't have, a squelch.

Keeping Your Baby Clean

We have to keep our baby clean! This keeps our baby happy and is a real indicator of how proud we are of our new arrival. In my 14 years as a scanner salesman, I've seen just about everything you can think of on scanners. The grime ranged from simple years of dust accumulation to every sort of food or drink to farm matter. Specific items have included soda pop, ketchup, mucous, candy, hair, insects, grease, and paint. I can remember all too many times running to the men's room to wash my hands after handling a scanner.

Your scanner demands very special care in cleaning. Never spray anything on your scanner. Dusting works best when done with a soft one inch paint brush. For tougher cleaning challenges use only a plexiglass cleaner. Plexo and Plastiglass are two examples of cleaners that can be sprayed onto a clean cloth or brush with shortened bristles. Then with care the scanner can have the look of a dolled up used car.

As the baby's face is very delicate, so is the display window in many newer scanners. Use extreme care in cleaning this part of your scanner. Never use a brush here. For those cases of gum or stickers on your scanner Goo Gone will do a nice job. This is the only exception to the rule of plexiglass cleaner.

The Doctor's Advice on Avoiding Serious Injuries

Just as with real human babies we can avoid many injuries to our scanners. Gerry Oliver is an

The basic cleaning tools: A 1-in. paint brush; a 1-in. paint brush with the bristles cut back; soft paper towels; plexiglass cleaner

BY JIM SUTTON

authority on scanner repairs. In his business of G&G Communcations (9247 Glenwood Dr., LeRoy, NY 14482, 716-768-8151), he has seen just about every type of injury. According to Gerry, who's been reparing scanners since 1973, the most prevalent injury potential is the keyboard. Keeping it free of foreign matter is the best prevention. With older scanners replacement keyboards are becoming more and more difficult to find.

BNC antenna bases need to be treated with care. When using an inside BNC antenna on your base scanner NEVER pivot or swing the antenna down. You will almost certainly damage the jack. Many older scanners have the antenna connecting directly to the circuit board through the top of the set. NEVER move the scanner without first removing the antenna. If you break the circuit board consider the scanner a DOA. I remember one lady who thought her antenna "jiggled" too much. She tried to remedy the situation by pouring glue into the scanner. The entire area around the antenna base was sealed with glue.

Be sure there is plenty of space behind the scanner to avoid ramming the power line and antenna leads into the wall. The same goes for mobile scanners against the dash or firewall.

Watch for Internal Injuries

Always keep the airways clear. If your scanner has ventilation slots or grillwork be sure to keep that area clear.

Don't overload the scanner with lots of extra speakers. Newer scanners often can't handle too many speakers.

Just as the parent needs to keep older siblings away from the baby you need to keep kids away from your scanner. I have seen small plastic toys and even crayons shoved into scanners.

Protecting Your Child From Strangers

Some enemies that can stalk your child are power surges and lightning. Be sure you have surge protection and lightning protection on your outside antenna. Add a smoke detector to the area by your scanner, if there isn't already one there. The electrical outlet should be accessible to be able to unplug your scanner in a hurry.

Engrave your identification into your scanner. Contact your local law enforcement agency for advice on engraving. Keep an inventory of your scanners and equipment including the serial numbers. Those with their ham license should check into ham radio insurance which may also cover scanners.

Roger Christiano demonstrates his scanner cleaning techniques

Child Abuse

When we hear of child abuse we cringe. Some cases of scanner abuse that have been observed over the years include dropping the scanner, mounting the scanner with screws that are too long, spraying things like lubricant into the scanner, and inserting the wrong power supply.

Would You Let this Man Babysit?

Only surgeons should perform surgery. The rest of us should restrict our medical activities to first aid. The most frustrating situation a salesman or repairman faces is the botched repair or modification. NEVER do anything to your scanner that you are not skilled in. Leave the work to a professional.

*SAMPLE REPAIR RATES
*$30 per hour
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*$60 per hour with customer helping
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The Proud Parent

That smiling, healthy child is a testimony to your care and skill. Just as the parent can brag about the honor roll accomplishment or being the star of the team you can see the fruits of your hard work when that scanner is sold or traded in.

Baby Pictures

We love baby pictures. Please send us a picture of your monitoring station and be sure you're in it. Tell us about yourself and about what you like to listen to. Be sure to list all of your equipment. Also, let us know your baby care tips. If we get enough we can have a follow up to this article.

Subscribe to National Scanning
1-800-423-1331

Bearcat Radio Club meets with federal officials

Norm Schrein recently met with U.S. Attorney General Janet Reno in Washington, DC. Schrein, as President of the Bearcat Radio Club, the largest organization of its type, regularly meets with federal authorities in an effort to preserve the rights of scanner listeners in the United States. Schrein was able to discuss several topics with the Attorney General during the one-hour meeting.

The Bearcat Radio Club has also appeared before members of Congress on various radio-related subjects and provides briefings for other government officials and agencies seeking a clearer view of the needs of the scanning community.

The Bearcat Radio Club, which publishes National Scanning, is the only scanning club in North America that provides a physical presence in our nation's capital, standing up for the rights of scanner listeners, meeting with officials who would have the greatest impact on the scanning hobby.

Norm Schrein meets with Janet Reno and a representative of the U.S. Marshals Service in Washington, D.C.

CHEEK 3

The King of Scanners takes this step-by-step, richly illustrated, bench manual far beyond everything ever published on scanner mods. Bill is a perfectionist who will help you convert your scanner into precisely what you've always wanted!

This comprehensive book even includes complete schematics, plans, parts lists, sources, assembly instructions, and test procedures to help you build your own computer interface!

There's expanded memory, cellular, DTS, SCA, and much more, and for many scanners.

The most eagerly awaited book in the history of radio monitoring, and worth every second of the wait. *This book moves scanning into the next century!*

May 1995, 244 pages, large format, $29.95

EMERGENCY RADIO! Scanning News As It Happens, *by "Mr. Scanner"* — **Norm Schrein, 214 pages, $14.95**

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What to do with a Frequency Counter

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By Tom Swisher

YOU NEED A FREQUENCY COUNTER.

What's that you say? "Who me? What in the name of Sam Hill do I need a frequency counter for? What possible use could I have for a frequency counter? Come to think of it, what is a frequency counter?"

Frequency counters are really handy devices. Although originally intended for use by service technicians in the course of tuning up transmitters, scanner users have found that they're perfect for discovering new frequencies to listen to. For a few years I've kept a nice old DSI 5600A (50 Hz–512 MHz) tabletop frequency counter on my workbench for radio service work. It works well, and has a battery pack for portable use. Saying that is something like saying that adding a battery pack to an elephant makes a pachyderm portable. What I really wanted was a handheld unit to carry in the "stuff" box for mobile service work and frequency finding.

There are a number of ways that you can find new frequencies. You can start out by buying frequency books. You can ask around for others. You can even use the "search" function on your scanner to search the airwaves. I don't always do too good with the "search" method as the transmitter I wanted to catch stopped transmitting before I could get the scanner programmed. The frequency counter solved that problem.

All I have to do with a frequency counter is to be within 10-15 feet of a handheld transmitter and I can pick up it's frequency. I've also had fun near transmitter antenna towers. If I want to know what frequency the transmitter is using, all I need to do is get near the tower and watch the frequency counter's display. (Unless there are just too many transmitters on the tower, in which case the counter just goes nuts. It does latch on to firm readings, but without a display hold feature I cannot get the frequency locked into my brain quickly enough.) For the most part, though, finding new frequencies with a frequency counter is like taking candy from a baby. This doesn't mean that it doesn't take skill and practice to use one of these "scanner listener's friends." It does. But you'll find new things to listen to that appear in no book.

The Startek ATH-30 is one of several handheld frequency counters in the Startek ATH product line, which also includes the ATH-10, ATH-15 and ATH-50 counters. The major difference between the units is RF signal strength LED bar graphs and different frequency coverage (ranging from 1 MHz–1200 MHz in the ATH-10 to 5 Hz–2800 MHz in the ATH-50). All incorporate the Auto Trigger and Hold feature.

I found the ATH-30 to be a really nifty unit. It is very easy to use and is small and easy to handle, which allowed me to carry it in my coat pocket when I was out trolling for new frequencies. It is ruggedly constructed with an aluminum case, and includes a

built-in NiCad battery pack with wall-pack charger. Unlike most newer counters these days, the Startek counters use a light-emitting-diode display which is far easier to read than an LCD display. More about that later. Response time for the ATH-30 was really great, too.

The ATH-30 is loaded with bells and whistles. One of the more common these days is display hold. This allows one to flip a switch when a positive readout is made, thus holding the display until you can write it down. This is a very handy feature, and I really wish my Radio Shack counter had it.

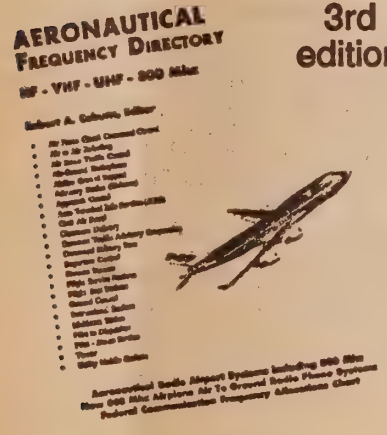
Another really great bell/whistle is the Auto Trigger and Hold feature. When activated, the ATH feature resets the display to zero and waits for a signal to come along. As soon as it senses a signal, it reads and displays the frequency, and automatically holds it. At the last major fire I took the club canteen truck to, I went out frequency trolling to find the local police department's new car-to-car frequency. I simply set the ATH-30 and stuck it in my coat pocket; when the cop next to me at the donut wagon used his radio (unaware that a frequency counter was a few feet away, heh heh), I had it! Then I just went around to the other side of the canteen truck, wrote down the frequency and reset the counter. Simple! You can do it too; just set up the auto feature, wait for someone nearby to transmit, then sneak off to the nearest convenience, write down the frequency and reset the counter, and you're the Wizard of Frequency Finding to your fellow NatScan readers.

The ATH counters also feature three selectable gate speeds, which vary the time it take to read a frequency. A slow gate speed will take a couple of seconds to display a frequency, but gives the most accurate readout, essential for bench work. Medium and fast are quicker to respond, but the accuracy is somewhat less. I found the medium gate speed to be more than adequate for my needs, but for most frequency trolling work, a fast gate speed is desirable. The counter will react quickly, and one still gets an accurate (for scanner purposes) reading.

A whole raft of accessories is available for the ATH-series counters. Included with my review unit were the soft case and the bandpass filters. The soft case was really great; it allowed me to carry the ATH-30 in my coat pocket, protected from damage and preventing the stuff rattling around in my pocket. I also tried out the bandpass filters; they really worked great. In fact, the bandpass filters worked so well I decided to try them out on my handheld scanner, too. Wanting to enhance railroad reception while downtown (which is plagued by that darn pager and cell phone interference), I found that the BP- 150 (130–500 MHz) filter did a great job of filtering out the interference, thus greatly enhancing my listening pleasure.

Best of all, unlike most "pocket size" devices, the Startek counters are really pocket size, measuring 4"Hx3.5"Wx1"D. They are very handy and easy to use, and incorporate a lot of great features. Handheld frequency counters are indeed convenient devices, and every serious scannist should have one.

If you're serious about finding new frequencies, think seriously about getting a frequency counter. The ATH-30 that I use sells for about $250.00 but Startek International, Inc. has others, including both less and more expensive models. Write them at 398 NE 38th St., Ft. Lauderdale, FL 33334 or call 305-561-2211. Their order line is 1-800-638-8050.



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Handheld model $31.95 plus $4.00 UPS
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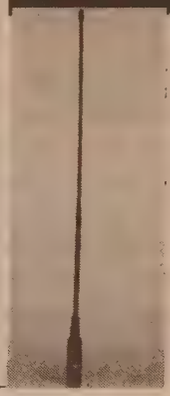
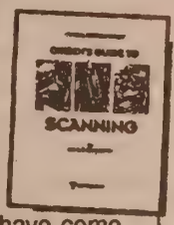
REPLACEMENT RUBBER DUCK



A replacement rubber duck for your scanner that really works! The RH77 is a 15" antenna that's got excellent gain all the way through 950 MHz. This is Diamond's rugged, commercial-grade VHF/UHF receive antenna. Plugs right in to every handheld scanner on the market today. Can also be purchased with the optional $5.00 right angle connector for use with base model scanners. $34.95

CITIZENS GUIDE TO SCANNING



This is the book that should have come with your scanner! 140 pages of vital information on how to get the most from your scanner. Everything from scanner operations to professional tips on pulling in the big signals. $19.95

SCANNER ANTENNA MULTICOUPLER
1 + 1 = 2

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If you really want to pull in cordless phone calls, this is the antenna. Specially designed for 49 MHz! Works inside or out. Comes with 10' of cable. Plug in and listen!

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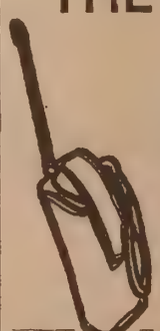

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SCANNER BEAM 59.95

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The Reviews Are In!

"The Scantenna -- Five Stars"

★★★★★

"I'M FOUR COUNTIES AWAY AND NOW I CAN HEAR MILWAUKEE!"
--Pete Edwards, Lake Geneva, Wisconsin

"I CAN HEAR THINGS WITH MY SCANTENNA THAT I NEVER KNEW EXISTED BEFORE!"
--Ken Peters, Los Angeles, California

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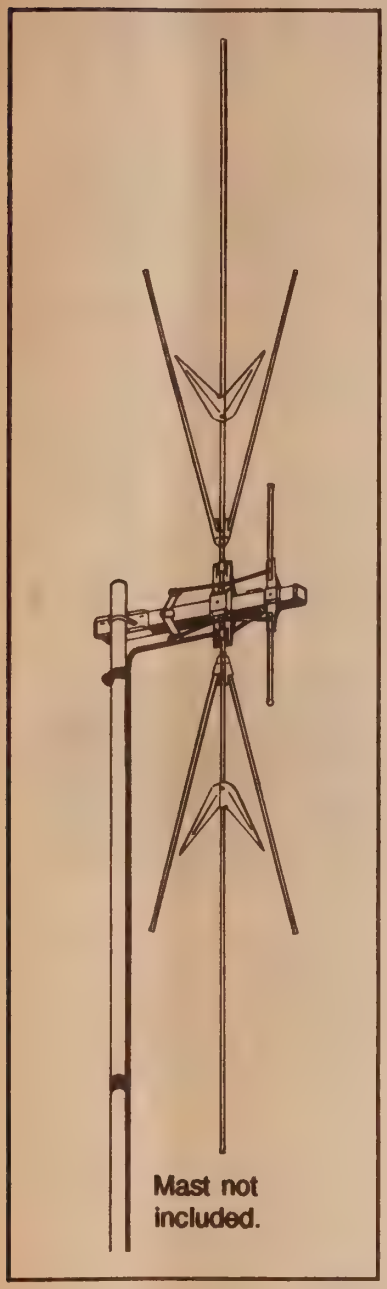
--Carroll Ethridge, Berkey City, Tennessee

"WOW! WHAT A DIFFERENCE! THE SCANTENNA IS THE BEST!"
--Travis Lantz, Iowa City, Iowa



The Scantenna is a quality antenna manufactured in the U.S. by AntennaCrafters, a firm well-known for its TV and FM antennas.

There's an old saying among communications specialists: your scanner is only as good as your antenna.

Get the most out of your scanner with the famous Scantenna. Designed for use with both handheld and base scanners, it dramatically increases the range of your radio by miles. Actual distance depends on local terrain and height at which you mount the antenna. The Scantenna provides continuous frequency coverage from 25--1300 MHZ providing superb reception of communications of all types. And it comes with a mounting kit and 50' of RG-59/U cable.

The Scantenna is available from DX Radio Supply for $39.95 plus $7.00 UPS. Optional Motorola to BNC connector $3.95. Send check or money order to P.O. Box 360, Wagontown, PA 19376. Or use your Mastercard, Visa or Discover and call 9am to 9pm, Mon. thru Sat. 610-273-7823

Please send me the Scantenna. Here's my check or money order for $39.95 plus $7.00 UPS shipping. DX Radio Supply, Box 360, Wagontown, PA 19376

Name ----------

Street Address ----------

City ---------- **State** ---------- **Zip** ----------

My MC, Visa or Discover account is:

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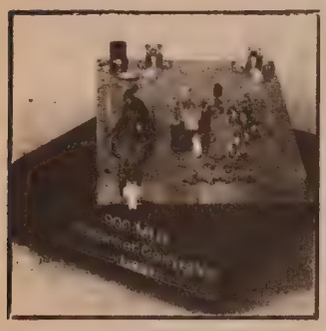
Signature ----------

Scanner Accessory Kits

DX Radio Supply • Box 360, Wagontown, PA 19376 • 610-273-7823

800 MHz Scanner Converter Kit



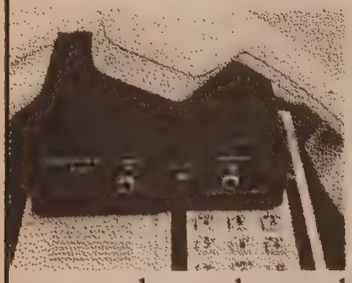
If you've always wanted to pick up 800 MHz frequencies -- including cellular phones -- on your scanner but your radio didn't get 800 Mhz or the cell phone frequencies were blocked out by the government, we have the answer. It's the 800-950 MHz Scanner Converter Kit.

The SCN-1 800 MHz Converter Kit can be used on any scanner that receives 400 to 550 MHz and it assembles in about an hour using simple, easy-to-follow directions. Once completed, hook-up is easy. A handsome matching case set is available for a good looking finished product.

Please remember that while it is not illegal to own either the kit or the the unit that you've assembled, it is illegal to listen, in the privacy of your own home, to other people discussing juicy details of their personal lives over the public airwaves on a cellular telephone.

SCN-1 Scanner Converter Kit $49.95
CSCN Matching Case Set $14.95

Speech Descrambler

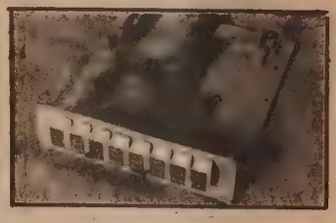


Descramble those garbled "Donald Duck" sounds that you hear on your scanner. The SS-70 will decode simple speech inversion scrambling which is the most commonly used scrambling systems on police, security, fire, cordless phones and business radio. The built-in 2-watt speaker amplifier makes scanner hook-up a snap. Can also be used to set up your own scramble/descramble system. The matching case finishes the job with a real pro look.

SS-70 Speech Descrambler Kit $39.95
CSSD Matching Case Set $14.95

Grab Telephone Numbers from your Scanner!

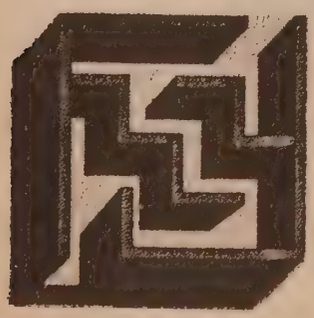
TG-1 Tone Grabber Kit



Use the TG-1 Tone Grabber to decode the touch-tone sounds you hear on your scanner when someone dials a phone. The number that was dialed is displayed on an easy-to-read 8-digit LED display. You'll know exactly what number they're calling!

A simple hook up to your scanner through an earphone or external speaker jack is all that's required. Operates off a standard 9 volt battery.

TG-1 Tone Grabber Kit $99.95
CTG Matching Case $14.95



Quick Tone CTCSS Sub-audible Tone Encoder/Decoder

CTCSS encoders and decoders have been off limits to hobbyists for some time. A few scanners have optional tone boards, but not many. Now, the new Quick Tone Tone Encoder/Decoder (QT-1) kit decodes any of the 39 Motorola PL sub-audible tones with crystal quartz accuracy. Jumpers allow easy frequency programming, and built-in audio filtering eliminates falsing and interference from normal speech. The QT-1 uses CMOS single chip technology and runs on a low 5-15 volts. Fits 2"x1"x½. Easily bypassed for no-tone operation.

Just $39.95

Questions? Comments? 610-273-7823 Questions? Comments? 610-273-7823.

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1. Fill in the order blank and send a check, bank or postal money order, or your complete credit card information to DX Radio Supply, Box 360, Wagontown, PA 19376.

PAYMENT
We accept Discover, Mastercard and Visa. For your protection we can only ship to the billing name and address listed with your credit card company. If you are unable to provide this information, please use a postal money order or certified check.
All credit cards are verified.
We also accept personal checks. All personal checks are verified. To speed your order, please write your bank's phone number on your check. Only in the rare event your check cannot be verified will your order be held for 21 days to allow for verification of funds.
If you live in the state of Pennsylvania, please include 6% sales tax. You do not need to include sales tax unless you live in PA.

SHIPPING CHARGES
1. We charge you 4.50 to ship the first book or kit. If you order more than one book or kit at a time, shipping on each additional item is $1.00. Cases for kits are shipped free so long as they are ordered at the same time you order the kit.
2. Because of size requirements, some equipment, like the Scantenna, must ship separately from books and other items. Shipping charges for those items are listed in the catalog. Wherever possible, orders are combined into a single shipment to save you money.
3. Canadian cusomters are subject to duties and GST taxes. These charges are the responsibility of the customer and not DX Radio Supply.

DELIVERY SCHEDULE
Once your payment is verified, DX Radio Supply ships your order the same day that it arrives in Wagontown. Your order will arrive within one to ten days of its receipt in Wagontown, depending on where you live in the country. In the rare event of delay, you will receive a postcard notifying you of the expected delivery date.

DAMAGES
Should you receive a damaged shipping carton, ask the UPS driver to wait while you inspect the contents. If there is damage, refuse the package and immediately call your local/regional UPS office. The driver will be able to give you the phone number. The damage determination is made by UPS and their decision is considered final.

RETURNS
At DX Radio Supply, we value your business and want every customer to be satisfied with each purchase. That's why we offer our free technical assistance line (610-273-7823) so that you can make sure that the product you order will be right for you before you buy. As a result, of the thousands of orders we receive, very few are returned. It is important to note that all sales are final. Returns can only be exchanged for the same item and must be accompanied by a receipt. The terms of the manufacturer's warranty apply. If you must return an item, first call 610-273-7823 for a return authorization number. Write the return authorization number on the outside of the package. Items returned without a return authorization number will be charged a restocking fee based on the invoice value: $0-$99 - $15; $100-$199 - $20; $200-$299 - $25; $300+ -$30. Ship the item to Box 360, Wagontown, PA 19376. We suggest that you insure the package for your own protection. Please note that kits are not returnable under any circumstances but do carry their own warranty from the manufacturer. Check the kit owner's manual for details.

LEGAL
It is the policy of DX Radio Supply, it's owners and affiliates, that knowing and observing the lawful use of any item offered for sale in this catalog is the responsibility of the customer. If you have questions about the legality of a product offered for sale by this company, please contact a qualified attorney in your area before ordering.
This catalog supercedes all previoused catalogs, flyers and advertisements.

SHIPPING ADDRESS

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

DAYTIME PHONE NUMBER: (Area Code) _____

PAYMENT METHOD ☐ CHECK ☐ DISCOVER ☐ MASTERCARD ☐ VISA ☐ MONEY ORDER

Is This An Address Change? ____ Yes ____ No

If this is your first order, where did you hear about DX Radio Supply? _____

Product	Quantity	Price	Shipping	Total

CREDIT CARD ORDERS Exp. Date: _____

Card Number: _____

Issuing Bank: _____

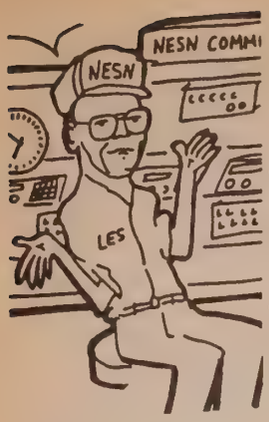
Signature: _____

Total $_____

Shipping $ _____

PA Residents (only) 6% Sales Tax $_____

TOTAL ENCLOSED $_____



THE NESN EDITOR'S DESK

Les Mattson, NESN Editor
Post Office Box 62-N, Gibbstown, NJ 08027
"NEWS YOU CAN USE"

Welcome to the November/December issue of NESN.

NEW *NATIONAL SCANNING* EDITOR NAMED

I was very pleased to learn of the appointment of James A. Sutton to the post of Editor of our parent publication, NATIONAL SCANNING. Jim has been a long-time Western New York Regional Column Editor for NORTHEAST SCANNING NEWS, attended the July 1995 NATIONAL SCANNING CONVENTION in Lancaster and has been a friend of mine for some years, communicating by telephone and the U. S. mail.

Larry Miller will continue to publish NATIONAL SCANNING. The promotion of Sutton will allow Miller more time to devote to his other enterprises including DX Radio Supply and more time to devote to our ever-growing annual Lancaster Convention. We all want to thank Laura Quarantiello who had much of the responsibilities of NatScan Editor in the past. Laura has agreed to continue as one of the Staff Writers, even with her busy schedule of free-lance writing endeavors.

NATIONAL SCANNING/NESN COMBINATION

NESN has now been a part of NATIONAL SCANNING for over a year. I think the relationship has been beneficial to both publications. National Scanning offers columns of nationwide interest, modifications, scanner and new product reviews, Gene Hughes' fine "Scanner School" column PLUS the best regional columns to be found in any other scanner publication. The combination of NatScan and NESN helped provide the impetus for our First Annual NATIONAL SCANNING Scanner Convention in Lancaster, Pennsylvania this year. What a successful, instructional and fun-filled event it was.

STANDBY REGIONAL COLUMN EDITORS WELCOMED

We have changes in column editors from time to time due to relocations, lack of time to devote to columns, health problems, etc. So, we welcome any of you who would like to be considered as a Standby Regional Column Editor to send us a note telling us a bit about yourself and include a sample column for us to examine. We will keep your name on our list of Standby Regional Column Editors and notify you when the next opening occurs. I re-type all 16-18 of our NESN section pages, so you needn't be concerned about typing styles, margins, etc. I spell-check all input, so as long as all proper names are spelled correctly by YOU, I'll be responsible for the rest of the spelling and grammar. If interested, please send me your letter and sample column to the address shown above. (We currently have openings for Virginia, Maine, and Florida and we would consider starting regularly scheduled columns for New Hampshire, Rhode Island and the District of Columbia.)

CTCSS (PL) TONES

Last issue I mentioned the request by many of you for us to publish more PL Tones. See my SOUTH JERSEY column for PL tones used in the Philadelphia/South Jersey area. Those of you who have purchased the new BearCat Model 9000XLT base scanner should strongly consider ordering the PL tone board option. Using this tone board, you can learn the PL tones used by your favorite agency and program them into your BC-9000. In this way, you can effectively block out transmissions from others sharing the same frequency that you most want to monitor. Hopefully, more scanner models will be available this winter with PL tone board capabilities.

Until next time, I wish all NESN Regional Column Editors and all the readers of National Scanning and the various NatScan employees a very Merry Christmas and a Happy New Year! Please Drive Safely and Soberly. L.M.

PATIENT: "WHY ARE THE SHADES DRAWN, DOCTOR?"
DOCTOR: "THERE'S A BIG FIRE ACROSS THE STREET. I DIDN'T WANT YOU TO THINK THE OPERATION HAD BEEN A FAILURE."

NEW ENGLAND

This section will cover the States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont

MASSACHUSETTS -By Mariner S. Ayer, 299 Thompson Street, Middleboro, MA 02346

Eastern New York Column Editor, JOE NOONEY advises us that the National Weather Service has a new transmitter on top of Greylock Mountain in Western Massachusetts. It can be heard on 162.525.

From Massachusetts reader, BOB JARRETT, we have the following input:

42.5000 = Massachusetts State Police (Troop D and Middleboro)
159.1650 = Massachusetts State Police (Turnpike)
159.1950 = Southwick Fire
450.3125 = TV Channel 22 News
463.1250 = C-Med (Channel #6)
165.9500 = Internal Revenue Service

154.1450 = West Springfield Fire
154.0700 = Holyoke Fire
463.0000 = C-Med (Channel #1)
167.2600 = Federal Bureau of Investigation

WILLIAM DUNN submitted this information about an airshow he attended recently at the South Weymouth Naval Air Station. This air show is held every year and is well worth seeing.

SOUTH WEYMOUTH NAVAL AIR STATION AIR SHOW

122.9250 = Link from Airshow aircraft to the Public Address speakers for the crowd to listen to.
155.3850 = Brewster EMS used a PL of **131.8** and provided extensive medical operations to assist the Naval Base's medical team.

126.6000 = Control Tower
340.2000 = Control Tower
352.4000 = Ground Control
360.2000 = Control Tower
140.5750 = Maintenance & Tower Control
142.6750 = White Base
464.5500 = Gulf Blimp (using DPL 165)

138.3750 = Towing/Service & Fuel Trucks
138.7000 = Sierra Base - Motor Vehicle Traffic Control
140.4750 = Sierra Base - Security Primary
140.9500 = Fire Department. & Base Ambulance
413.1000 = Military Police
141.8500 = Thunderbirds (Primary Operations)
322.9500 = Thunderbirds Solo Demonstrations

DAVE RANDALL attended the same Air Show and sent in these frequencies:

126.2000 = Main Air Show Frequency
141.8500 = U. S. Air Force Thunderbirds
123.4000 = U. S. Army Golden Knights
122.9250 = Air Show Discrete (used to talk back and forth with the different performers during the show and sometimes repeated over the loudspeaker system.)

BRUCE TALANIAN wrote to suggest all readers punch in 151.475 and monitor the Friends Of The Blue Hills frequency.

WARREN GREENBERG wrote to tell me about his tour of the Boston Police 911 Center, AKA "The Turret." The center handles all 911 calls for the City of Boston. Police and EMS calls stay on the floor while fire calls are transferred to Boston fire alarm headquarters in the Fenway. While at the EMS area, the console had a new frequency of 453.7750 (PL ??) Warren was told this will be used for major events.

DAVE RANDALL admits he took a day off from work and treated the family to a day at Riverside Park in Agawam, MA. The following frequencies were confirmed: 464.5625, 464.8250 and 464.9250. After leaving the park Dave and family decided to go shopping at the Holyoke Mall at Inglesdie, Holyoke, MA. Dave found the security frequency at the Mall to be 464.5200.

I once again want to thank Joe Nooney, Bill Dunn, Bob Jarrett, Bruce Talanian, Dave Randall and Warren Greenberg for their tremendous support. I believe the Massachusetts column has had tremendous support by the NESN members and I truly thank you all for your letters and input. YOU'RE THE BEST!! MERRY CHRISTMAS TO ALL AND TO ALL A GOOD NIGHT!

HOSPITAL ROOM = WHERE FRIENDS OF THE PATIENT GO AND TALK TO OTHER FRIENDS OF THE PATIENT.

NEW ENGLAND

Continued from previous page

NEW HAMPSHIRE- By The NESN staff

Thanks to Vermont column Editor, JIM LAWRENCE, for the following New Hampshire input:

I spent a weekend camping in the North Conway area this past summer. Prior to leaving home, I plugged every VHF-low band frequency I had for the New Hampshire State Police into my scanner. I monitored all weekend and the only activity I detected was on 45.2600, Troop F. Is it my imagination? It seems to me that law enforcement in New Hampshire is making less and less use of their low band frequencies.

One of the more active facilities in northern New Hampshire is Twin State Fire and Mutual Aid dispatching on 154.4000. Twin State handles calls for a good hunk of north central New Hampshire and some communities in neighboring Vermont. Some of the municipalities I've heard dispatched by Twin State include Monroe, Cooksville, Bath, Woodsville, Woodstock, Twin Mountain fire and Littleton Fire. Municipalities dispatched in Vermont include Ryegate, Groton and Wells River. Twin State also broadcasts a fire advisory for the state at 1200 local time daily. Here's some other frequencies that I have monitored as being active:

NORTH CONWAY AREA MONITORING

45.2600 = New Hampshire State Police Troop F - Twin Mountain (little used but still hear ID on the hour)
45.4600 = New Hampshire State Police Troop E (Nothing heard, not even the usual ID at :00 and :30 past the hour)

151.3400 = NH Fish & Game Wardens
154.8300 = Belknap County, NH Sheriff
155.0700 = Cheshire County, NH Sheriff
155.0850 = Grafton Co., NH
155.3100 = Littleton, NH Police
155.4900 = Lebanon, NH Police
155.6250 = NH Registry of MV, Concord
155.9100 = New Hampshire State Police Northern NH
162.5500 = NOAA Weather Radio, Concord, NH
381.4000 = Air Traffic Control, Boston Center

154.7700 = Grafton Co. NH Dispatch
155.0700 = Woodsville, NH Police
154.8600 = Carroll County, NH
155.2500 = Lebanon, NH Police
155.3400 = Hospital to Ambulance in Vermont & NH
155.5950 = Hanover, NH Police
155.6850 = Merrimack Co., NH Dispatch
156.0900 = New Hampshire State Police Southern NH
167.7125 = Federal Bureau of Investigation, NH Tactical
462.4500 = New Hampshire State Police relay

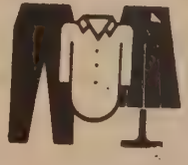
SEMINAR HANDOUTS - SOLD OUT!

In the last issue of NatScan, I offered my leftover Lancaster Convention seminar handouts to anyone who sent me a SASE #10 envelope with $ .55 postage. Sorry, the orders exceed the supply, so no more orders can be mailed out. There may be a reprinting of these by DX Radio Supply in the future. L.M.

Cloverleaf Mall

SHOPPING MALL MONITORING

By Les Mattson



This is the holiday season, the best time of year to monitor your local shopping mall.

I've monitored cash drawer shortages of hundreds of dollars, shoplifting, falls on escalators, persons trapped in stuck elevators, personnel needed to cleanup spills, alerts for watching "particular shoppers." arguments over the lack of stock on special sale items, stolen cars from parking lots, lost children, electrical outages and various other mall happenings. Unfortunately this is the holiday season when all these tragedies occur.

Try these pretty common mall frequencies: 151.6250, 151.8350, 151.8650, 151.8950, 154.5150, 154.5700, 154.6000, 461.9000, 464.4750, 464.5250, 464.5750, 464.9125 and 464.9250.

THE WORST THING ABOUT POLITICAL JOKES IS THAT MOST OF THEM GET ELECTED.

NEW ENGLAND
Continued from previous page

VERMONT -By Jim Lawrence, Post Office Box 167, Webstersville, VT 05678

Imagine waking up on a beautiful Saturday morning, powering up the scanner and hearing an emergency service dispatch for a male lying on the ground and not moving, and a weird low-lying cloud in the vicinity of a natural gas facility. Upon arriving on scene, the fire department realizes it has major problem on-scene and over the next 15 minutes, four additional municipalities are toned out and sent to the scene. That kind of event greeted the citizens of central Vermont recently.

Fortunately, it was only an exercise, long anticipated and widely announced in the local press. Fire, ambulance and rescue personnel from several towns participated and practiced coordinating their efforts in response to this call. The exercise was hosted by Barre Town; participants included units from East Montpelier, Berlin, Waterbury, Middlesex and Williamstown.

Incident Command was on 154.2950. Other frequencies in use: 154.1900 the Main Dispatch, 460.1000 Barre Town Police Department "BT1," 154.0550 Barre Town municipal frequency and 458.8250 the Vermont State Emergency Response. Exercises like this are wonderful because they give you an opportunity to collect frequencies that would be in use in an actual emergency of this kind.

In September, I attended the Champlain Valley Fair in Essex Junction. I was able to catch the following media-related frequencies in use at the fair. Both stations mentioned are located in the Burlington area:

THE CHAMPLAIN VALLEY FAIR

450.7500 = WVMT Radio Channel 1 450.8500 = WVMT Radio Channel 2 153.1100 = WOKO Radio

There were two ambulances from Essex Rescue and one fire truck from the Essex Junction fire department at the fair. Essex Rescue serves the towns of Essex, Underhill and Jericho and operates a link on 467.5000 for communicating with units in the shadow of Mt. Mansfield. You can hear the link frequency over a good portion of the northern part of Vermont. The fine folks from Essex Rescue provided me with the following list of frequencies for some communities in Chittenden County:

155.3400 = Hospital to Ambulance = Channel 1
154.3550 = Essex Junction Fire Department
154.1300 = Essex Town Fire Department
155.0550 = Colchester Rescue
154.1450 = Iroquois Dispatch, Williston & Hinesburg
154.1900 = Cambridge Fire Department
155.2950 = University of Vermont Rescue
152.3600 = St. Michael's College security, maintenance etc.

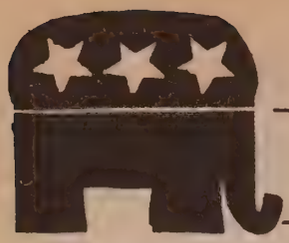
155.2800 = Hospital to Ambulance Channel 2
155.2050 = Essex Main Dispatch
155.7750 = Underhill & Jericho Fire Department
154.2350 = Westford
155.1750 = Richmond Rescue
155.0250 = Williston Fire Department
154.9650 = Shelburne Rescue

The firefighters from Essex Junction mentioned that virtually all the fire departments in Chittenden County use 154.3850 as the fireground common frequency.

Those of you coming up to ski at Stowe this winter might enjoy listening to Stowe Rescue when you're not on the slopes. You'll find them dispatched by Lamoille County on 154.0400. The Civil Air Patrol in Vermont, call sign "Pico", has applied to change their main frequency used in the northern part of the state. Currently, they use 148.1500 as their main repeater output frequency throughout Vermont. However, in northern New York and northern Vermont, they share the frequency with a business concern north of the border and the two are constantly interfering with one another. The application has been sent to the NTIA and the Air Force for approval. It appears now that the only repeaters that will be affected will be the ones on Whiteface Mountain in the Adirondacks and Mt. Mansfield. I'll keep my ears open and let you know when I learn the new frequency.

I hope you all have a wonderful holiday season and that Santa brings you that new scanner you've been asking for. Remember, Santa knows who's been naughty and who's been nice, so be nice and impress the jolly old elf by sending along to me what you're listening to. Happy Holidays!

THE NEXT BEST THING TO BEING RICH IS TO LEARN TO ENJOY INEXPENSIVE THINGS.



NEW JERSEY

This column will cover the State of New Jersey

CENTRAL - By Louis G. Shirley, c/o NATIONAL SCANNING, POB 360, Wagontown, PA 19376

POLITICAL CAMPAIGN MONTORING

Hello, and welcome to the CJ column. It's election time once again and this year and 1996 both promise to be as explosive as ever. Today's news finds House Speaker Newt Gingrich (R) in Plainsboro, NJ for a fund raiser and Ross Perot once again looking to come to NJ for support. Of course, Bill Clinton will unquestionably court NJ voters once again. Expect every other candidate running for President to show up also.

If you live anywhere in the state, here is a primer for scanning such activity. The Secret Service will be close-by every declared candidate for the presidency. While agents will be assigned to follow the candidates, the local U. S. Secret Service office in Newark will also supplement agents. When candidates come to town, listen to 165.5125/166.4875 as the main Newark USSS frequency. Also tune into 165.6875/166.8000 which is Channel 2. All of the above frequencies can be used alone as simplex frequencies. On one Clinton visit, they used 166.4875 only as their motorcade frequency.

Another interesting find was the use of 169.9250 (simplex) recently, by the USSS counterfeit team on a trek though New Brunswick. This frequency was last heard when Jimmy Carter visited the town. But, the Moneyrola$ radios the Newark USSS use have plenty of frequencies to hide on. They are also scanning radios and they monitor SPEN-1 (154.6800) and SPEN-2 (155.4750), two of the N. J. State Police emergency frequencies. Plus, there is the Treasury Common frequency of 166.4625 that I've heard them use after the party is over and the agents are heading home.

Here are the most common frequencies in use on Presidential details: BRAVO - 165.6875. CHARLIE - 165.3750. HOTEL - 166.2125. MIKE - 165.2125. OSCAR - 164.8875. PAPA - 164.4000. TANGO - 164.6500. These will net you most of the action but there are plenty of other potential frequencies between 164 and 171 MHz, so if you know how to use your scanner's search mode, this is where to look.

The USSS also uses some UHF frequencies. When the Pope came to New Jersey in October, the USSS and FBI provided protection. I heard 407.9250 being used by the USSS at one point. I've also heard this one used in the past by mobile units. The search range in the FED UHF band is 406-420 MHz. One major clue to USSS activity is the use of their mobile paging operation. The freq. is 167.0250, and if your frequency counter locks on, they are nearby. But don't forget to monitor your local police department and the N. J. State Police freqs.. Now is the time to search for hidden frequencies. The mention of channel 5 by a police department that you know only uses 4 channels, is a give away to another frequency that you never knew about, time to start searching.

Someone like Ross Perot can have USSS protection, but in the past he has refused. On his visit to the Flemington Speedway during the '92 campaign, the Speedway provided its own security people. They used business band radios tuned to 151.7450. But, the county also provided security and traffic control. The fire and EMS people were on scene and used SPEN-4 (153.7850) as their command post frequency. N. J. S. P. used the 800 MHz trunk system and the county Sheriff used SPEN-1 (154.6800) and 154.785/158.910.

It's worth keeping in mind that a private security detail may be used for security or traffic control. If you have a freq. counter, always take it along to quickly find those elusive freqs. In the future, we can look at the campaign scene again, let me know if you have any comments, suggestions and/or frequencies to add to the ones shown above.

Local things remain the same. But do monitor 453.4750, 453.5750, 453.7250 and 453.8250 for Middlesex County activity. While the 800 MHz trunk radio system is not being used yet, the county does use the UHF and the New Brunswick Police Department even used the Public Works radios one day, for a decoy police prostitute roundup. I also caught the use of 163.1100 for a bug which was inside someone's car on Route 18. This is an FBI freq., unknown what connection there might be. I also found the use of a "wire" at a union meeting I attended. Very interesting indeed, someone was bugging this meeting! Just another reason to warn you that there is no such thing as privacy anymore. Till next time, bye, bye, Scanneroos.

HOW COME THE PERIOD WHEN TRAFFIC MOVES THE SLOWEST IS CALLED THE "RUSH HOUR?"

NEW JERSEY

Continued from previous page

NORTH JERSEY - By Ray Kenny, Post Office Box 213, Broadway, NJ 08806

Hello and welcome to the North Jersey column. The drought of summer 1995 has been especially hard on the North Jersey area. The ground is dry and reservoirs which would normally be 70-80% full are now down to 50-60% of capacity. This has caused the Forest Fire Service to be very busy with brush fires and has caused local police departments and water company employees to go around looking for people who are using water in violation of the drought emergency restrictions.

NORTH JERSEY FOREST FIRE FREQUENCIES

North Jersey is covered by Division A of the New Jersey Forest Fire Service. Any mobile units that you hear should identify with the A prefix (e.g. A72). I do not have a list of what numbers belong to what unit. so if you have this information, please send it in and I will pass it along to the readers. The Forest Fire Service has several fire towers, giving them a view of the entire northern half of the state, so that they can easily pinpoint any fires. The towers are manned whenever the risk for brush fires is high. Moving on to the frequencies used:

NORTH JERSEY FOREST FIRE FREQUENCIES

151.4150 (PL 179.9) = North Jersey Division "A" Forest Fire Repeater
159.3750 (PL 179.9) = Simplex Truck to Truck

A good amount of activity occurs on the Tower to Tower and Tower to Truck frequencies. I also have heard this used as a command post frequency during the larger brush fires.

MISCELLANEOUS INFORMATION

NEW FREQUENCY - Listen for 151.370/159.300 to become active in the North Jersey area within the next 6 months. It is the new frequency obtained by the West Morris Communications Network to be used as their Police East channel that will cover the Chester Boro and Chester Township areas. Call sign for this frequency pair is WPGM321. I have also come across some PL info that I have not seen printed anywhere before. The Mount Olive Police use 39.4000 (PL 173.8) and the Roxbury Police are on 39.1600 (PL 173.8)

I want to congratulate Jim Sutton on being named as the new NATIONAL SCANNING editor. I met Jim at the Lancaster, PA Scanner Convention in July.

CORRECTION - In the September/October issue it was incorrectly noted that 46.620 is used extensively by fire companies in Morris County. That Should Read 46.4200.

I wish everyone a safe and Happy Holiday Season. See you all next year!

THREE RETIREES, EACH WITH A HEARING LOSS:

"WINDY, AIN'T IT?"
"NOPE, IT'S THURSDAY."
"SO AM I. LET'S HAVE A COKE."

NEW JERSEY

Continued from previous page

SOUTH JERSEY - By Les Mattson, Post Office Box 62, Gibbstown, NJ 08027

Welcome to the November/December issue of NESN. The first thing I must do is to correct something in my last column. I indicated two frequencies for the oil spill cleanup team in the Delaware River. The correct frequency is 150.9800.

This issue, I thought I would print some common CTCSS (also known as PL tones) for the South Jersey area. Any of you contemplating the purchase of a new top-of-the-line base scanner should think about getting one with a CTCSS tone board. This allows you to block out any paging, taxis or other interfering transmissions sharing the same frequency that perhaps your favorite local hospital security uses.

SOUTH JERSEY AREA CTCSS TONES

FREQUENCY	PL TONE	USER OR AGENCY USING THE PL TONE
462.0000	123.0	GREATER PHILA. EMERGENCY NOTIFICATION NET (WAS PHILA. FIRE FILMS)
155.3850	100.0	PENNSTAR MEDICAL EVACUATION HELICOPTER
159.3750	179.9	NJ FOREST FIRE COORDINATION (USED BY MOST NJ STATE VHF)
154.6800	131.8	NJ STATE POLICE SPEN-1 (USED ON THE OTHER SPEN FREQS. ALSO)
460.2250	151.4	CAMDEN CITY, NJ POLICE (USED ON MOST CAMDEN CITY POLICE FREQS.)
507.1125	192.8	CAMDEN COUNTY, NJ POLICE (USED ON MOST CAMDEN CO. POLICE FREQS.)
500.3125	114.8	CAMDEN COUNTY ROADS DEPT.
453.2250	103.5	TRENTON CITY POLICE (USED ON MOST TRENTON CITY POLICE FREQS.)
165.4625	100.0	U.S. CUSTOMS (USED ON MOST CUSTOMS FREQUENCIES)
417.5000	156.7	U.S. DRUG ENFORCEMENT AGENCY (USED ON MOST DEA FREQUENCIES)
167.5000	167.9	U.S. FEDERAL. BUREAU OF INVEST. (USES THIS PL ON MOST FBI FREQS.)
163.2000	127.3	U.S. MARSHALS SERVICE (USES THIS PL ON MOST OF THEIR FREQS.)
165.9500	123.0	INTERNAL REVENUE SERVICE (IRS USES THIS PL ON MOST FREQUENCIES)
169.6000	91.5	U.S. POSTAL SERVICE (USES THIS PL ON MOST OF THEIR FREQUENCIES)
418.3000	114.8	U.S. POSTAL SERVICE INSPECTORS (REPORTEDLY USE THIS PL ON 400 MHz?)
163.4125	127.3	U.S. ARMY CORPS OF ENGINEERS (REPORTEDLY USE THIS PL?)
172.1500	136.5	FEDERAL AVIATION AGENCY (HAS BEEN KNOWN TO USE THIS PL?)
855.2125	76.6	N. J. STATE POLICE TROOP "A" USES THIS PL ON ALL 800 MHz FREQS.
453.0500	203.5	PHILADELPHIA CITY POLICE (USES THIS PL ON MOST FREQUENCIES)
154.2350	88.5	PHILADELPHIA FIRE (F-1) SOUTH BAND (THIS PL USED ON ALL FIRE FREQ.)

GREAT EXAMPLE OF THE USE OF CTCSS (PL) TONES:

Here's a wonderful example of how CTCSS tones work. Each of the agencies below use the same frequency but the use of PL tones keeps one agency from confusing another. Only one agency can hear what is transmitted on their particular PL Tones. This frequency, 156.2100, has been in use since the 1940's. It was originally known as the Shore Net and most municipalities bordering the Delaware River and on around and up the Atlantic Coast used this frequency for inter-communications, much like the present day N. J. State Police SPEN-1 frequency.

156.2100	71.9	CHESTER CO., PA POLICE (USE THIS PL ON MOST OTHER FREQUENCIES)
156.2100	203.5	SALEM COUNTY POLICE DISPATCH (USES THIS ON MOST OTHER FREQS.)
156.2100	179.9	VINELAND CITY, NJ POLICE (USES THIS PL ON MOST OTHER FREQUENCIES.)
156.2100	118.8	ATLANTIC COUNTY, WILDWOOD, WILDWOOD CREST, NJ POLICE
156.2100	156.7	BRIGATINE CITY, NJ POLICE
156.2100	118.8	CAPE MAY COUNTY, NJ POLICE & LOWER TOWNSHIP POLICE
156.2100	179.9	DEERFIELD TWSP., MILLVILLE CITY, AND VINELAND, NJ POLICE

JURY: TWELVE PEOPLE WHO DECIDE WHO HAS THE BEST LAWYER.

NEW YORK STATE

This column will cover the State of New York

EASTERN NEW YORK - By Joe Nooney, Post Office Box 30, Valatie, NY

Hello again and welcome to the November/December edition of ENY. Just a reminder that there's a lot of partying going on this time of year and for you to be careful. Remember, if you drink, don't drive and if you're driving, don't drink. I'd like all of you to be around for the New Year.

I've been reading articles about how some cities are switching to 800 MHz digital trunking systems and the doom and gloom predictions about the future of our hobby. Well, there's no doubt that communications and by extension, scanning, are changing. But, don't go throwing your BC9000 and yourself off a bridge just yet. Many cities don't have the bucks right now to purchase expensive new radio systems. Many suburban and rural municipalities don't have the funds OR the need for such equipment. Believe it or not, some enlightened law enforcement officers even consider scanner listeners an asset, extra eyes and ears as it were.

Yes, there are those places whose officials have more money than brains at their disposal and who will buy anything Moneyrola says will foil us "evil" scanner listeners. But, then again, how many 800 MHz trunked systems did they sell using that same line? Plenty, I'm sure. Most of you who monitor one of those systems are able to do it with relative ease. Sure it takes a little work, but it can be done. Besides, all the techno-dweebs in our hobby will keep us one short step behind the emerging technologies. After all, it wasn't that long ago that most of us didn't know how to use PL tones to enhance our monitoring. Now, it's commonplace. Keep the faith, hobbyists. Nuff said?

For those of you who venture up our way to ski this time of year, we have some public safety frequencies from Greene and Warren Counties. Greene County is home to the Hunter Mountain, Windham and Cortina Valley ski areas. Warren County is home to Gore Mountain and the Hickory Ski Area.

GREENE COUNTY AND WARREN COUNTY SKI AREA FREQUENCIES

GREENE COUNTY		WARREN COUNTY	
155.9100	SHERIFF (R) DISPATCH	154.7250	SHERIFF (R) DISPATCH
159.2550	SHERIFF (I)	154.8600	SHERIFF
158.7450	SHERIFF	154.9500	SHERIFF CAR-TO-CAR
156.2100	WINDHAM POLICE DEPT.	33.9000	COUNTY FIRE DEPARTMENT
154.8600	HUNTER PD & AMBULANCE	154.1750	COUNTY FIRE - PAGERS
46.1400	COUNTY FIRE DISPATCH	154.4000	GLENS FALLS FIRE DEPT.
46.2600	COUNTY FIRE FIREGROUND	155.0100	GLENS FALLS POLICE DEPT.
155.7750	CATSKILL POLICE DEPT.	155.1300	GLENS FALLS POLICE DEPT
151.8350	RICHARDS AMBULANCE	154.3250	LAKE GEORGE FIRE DEPT.
154.5150	RICHARDS AMBULANCE (F-2)	154.6800	NEW YORK STATE POLICE CAR/BASE
155.2650	DURHAM AMBULANCE	155.4450	NEW YORK STATE POLICE BASE/CAR
154.9350	N. Y. STATE POLICE CAR/BASE	155.5350	N. Y. STATE POLICE BASE/CAR

Finally, the scanner scene has been very quiet here in Eastern New York. Not a lot of new licenses, no new radio systems, etc. I do have one little "mystery" that I'm hoping the readers can clear up. A police agency somewhere within my listening area is using 154.1150. Mostly, the identifiers are "Shield ## ", but I never get enough info to figure out who they are. If you can help me find out who this is, it would be greatly appreciated. I know who is licensed on that frequency (all Local Government) but I just can't seem to pin it down. That's it for now. Until next time, we're Signal 140. (And, Have A Nice Holiday!)

NEW YORK STATE
Continued from previous page

NEW YORK CITY - By Brendan Quigley, c/o NATIONAL SCANNING, POB 360, WAGONTOWN, PA 19376

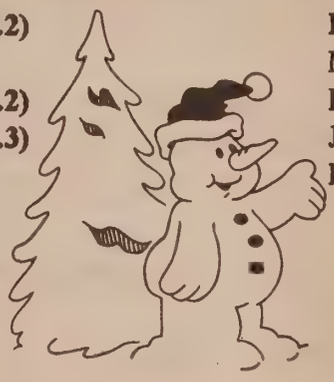
In late August, brush fires ravaged eastern Long Island. The response to these fires was enormous with every fire department from Nassau and Suffolk County responding. In addition, 21 engines from the FDNY responded. In light of this event, I feel that now would be a good time to look at the fire frequencies for Long Island.

Nassau County, the western section of Long Island, has 71 departments. Several of these departments operate on their own frequencies but most operate on the following:

46.1000 = County-wide dispatch
46.3200 = Battalions 1, 6, 7 Operations
46.3000 and 153.8300 = Fireground
46.2000 = Battalions 2, 3, & 4 Operations
46.1200 = Battalions 5, 8, 9 Operations
46.2200 = Unit to Unit

Departments that operate on their own frequencies include:

Garden City	154.0400	**(PL 186.2)**
Syosett	453.1000	
Wantagh	471.3125	**(PL 162.2)**
Hicksville	151.3850	**(PL 127.3)**
Plainview	477.1625	
Freeport	155.1000	**(PL 123.0)**
Massapequa	470.5125	**(PL 77.0)**
Hempstead	154.9800	**(PL 146.2)**
Jericho	460.6000	
Rockville Center	33.9000	**(PL 131.8)**



Suffolk frequencies include:

46.3400 = Operations Div. 1, 2, 8, 9 & 10
46.4000 = Div. 5
46.4400 = Divisions 3 and 4
46.4600 = Countywide Dispatch
46.4800 = Div. 6 & 7
46.3800 = Mutual Aid

During the Suffolk wildfires, 46.4600 and 46.3800 saw a great deal of use.

Also of interest to Long Island scanner listeners will be the fact that Nassau Police Department Precincts 1 & 7 have again switched frequencies to 478.5375 - Channel 5.

THE READERS WRITE: Thanks to Philip B. Kirk for sending in the following favorite frequencies of his:

38.0500 = WCBS-TV (Audio)
161.4450 = Long Island RR
160.6050 = Long Island RR
50.0500 = WNBC-TV (Audio)
160.4550 = Long Island RR
160.3200 = Long Island RR
450.0875 = WCBS-88 (Ground to Air)
160.9050 = Transit Police (Manhattan)

Another reader, anonymous this time, sent in the following airport frequencies for Republic Airport in Farmingdale:

118.400 = NY Approach
121.600 = Ground Control
125.200 = Tower
126.650 = ATIS
128.250 = Clearance Delivery
134.350 = NY Approach/Departure
121.800 = Fire Department
123.200 = Ground Control
129.250 = ARINC
118.800 = Tower
122.950 = Unicom
125.700 = NY Departure
127.400 = NY Approach
132.400 = NY Approach
155.805 = Airport Operations
453.475 = Airport Operations
129.000 = ARINC
123.700 = NY Approach/Departure

Good bye for this issue. Have a Very Merry Christmas and a Happy New Year!

IF YOU WANT TO WALK THE STREETS SAFELY AT NIGHT, CARRY A PROJECTOR AND SLIDES FROM YOUR LAST SUMMER VACATION.

NEW YORK STATE

Continued from previous page

WESTERN - By Jim Sutton, Post Office Box 115, Mt. Morris, NY 14510

Welcome to the November/December column. We'll start off with a list of Western New York frequencies with PL tones in bold print.

SOME WESTERN NEW YORK PL USERS

USER	FREQUENCY	PL TONE	USER	FREQUENCY	PL TONE
Erie County Sheriff (1)	460.0750	**151.4**	Kenmore Police	460.5000	**173.8**
Erie County Sheriff (2)	460.4500	**151.4**	Lackawanna Police	460.1500	**151.4**
Erie County Sheriff (3)	460.4000	**151.4**	Niagara Falls Police	460.1250	**151.4**
Erie County Sheriff (4)	460.2000	**151.4**	Niagara Falls Police	460.3750	**151.4**
patched to 155.5800 (CPS)	460.2750	**151.4**	NFTA-Airport	453.8250	**179.9**
Buffalo Police (1)	460.3250	**151.4**	NFTA-Airport	453.4750	**179.9**
Buffalo Police (2)	460.3500	**151.4**	NFTA Airport	453.9375	**179.9**
Buffalo Police (3)	460.4250	**151.4**	Buffalo Police (4)	460.4750	**151.4**
Buffalo Police (5)	460.0250	**151.4**	Gowanda Police	155.7900	**151.4**
Tonawanda City Police	460.2250	**173.8**	Hamburg Police	155.7900	**114.8**
Tonawanda Town Police	460.1000	**173.8**	E. Aurora Police	155.6400	**162.2**
North Tonawanda Police	460.1750	**151.4**	W. Seneca Police	155.2500	**162.2**
Evans/Brant Police	155.7900	**173.8**	Amherst Police	154.7400	**127.3**
Orchard Park Police	155.1900	**162.2**	Cheektowaga Police	155.6100	**151.4**
Depew/Lancaster Police	155.6550	**103.5**	Niagara Co. Sheriff	154.7550	**151.4**
Cattaraugus Co. Sheriff	159.4050	**118.8**	Chautauqua Co. Sheriff	156.2100	**84.5**

On Saturday, September 9th, I attended the Shortwave and Scanner Listener's Picnic at Clay Park in Clay, NY just north of Syracuse. This was a very enjoyable and relaxed day with 60 persons in attendance. Many listeners brought their equipment for others to try. This is THE place to try different receivers to determine which one you like best before making an actual purchase. The tables were loaded with frequency lists, product information, catalogs, etc. I especially enjoyed the time spent visiting with other listeners, comparing notes and ideas. At the picnic, I confirmed that Auburn City agencies have gone to 800 MHz trunking. This should be placed on your 1996 calendar as a MUST! The date will be September 7, 1996. It would be worth the trip even from out-of-state. For more information, write to John Storsburg, P. O. Box 101, Clay, NY 13041.

ONTARIO COUNTY LAW ENFORCEMENT

Ontario County Sheriff	154.815/155.850 = 158.955 = 159.090		
Ontario County Jail	155.130	Geneva Police	159.345/155.535
Canandaigua Police	155.970		
Troop E = N. Y. State Police	Base/Car	154.905	Car to Base = 154.770
	Car to Car	154.665	Car to Car . = 155.475
	State	154.695	
	Data Base to Car	155.625	Point to Point = 155.370
	Data = Car to Base	155.565	

I wish my readers a Very Merry Christmas!

A SMALL TOWN IS A PLACE WHERE EVERYONE KNOWS WHOSE CHECK IS GOOD AND WHOSE SPOUSE ISN'T.

PENNSYLVANIA

This column will cover the State of Pennsylvania

EASTERN - By Josh Heller, c/o National Scanning, P. O. Box 360, Wagontown, PA 19376.

Thanks to STEVE BOWER, JR. for the following list of Lehigh/Northampton County Area frequencies:

LEHIGH/NORTHAMPTON COUNTY FREQUEINCIES

154.1750 = Lehigh Co. Fire Network Dispatch
33.4800 = Lehigh Fireground (F-3)
158.7450 = Lehigh Co. Fire Police
33.9600 = Lehigh Co. Fire Network (Emmaus)
33.9200 = South Whitehall Fire
154.0700 = Fogelsville Fire Company
33.5600 = Coplay Fire Company
153.8300 = Wescosville Fire Co. (Local Repeater)
153.9500 = Western Salisbury Fire Company
155.8350 = Lehigh County Ambulance (A-5)
155.3400 = Lehigh Co. Ambulance (A-2)
Regional Med Channel
151.3550 = Cetronia Ambulance (F-1)
155.2800 = Cetronia Ambulance (F-6)
154.6000 = Northwestern Ambulance
155.2350 = Northampton Co. Medical to Hospital
461.1000 = Blue Mountain Control Medic #9
452.3250 = Life Support Ambulance (UHF-1)
155.2200 = MedEvac to Lehigh Valley Hospital
158.8500 = Lehigh Co. Police Dispatch (F-4)
(That's right! Channel FOUR!)
460.4750 = Whitehall Police Dispatch
158.9200 = Fountain Hill Police (F-9)
156.0150 = Walnutport Police
158.8350 = Emmaus Police (F-2)
159.1050 = Upper Saucon Township Police
159.0900 = Allentown Police (F-2)
154.7250 = Allentown Detectives

33.5200 = Lehigh Fireground (F-2) (MAIN)
33.9800 = Lehigh Fireground (F-1)
154.1300 = Lehigh Co. (Whitehall area) Fire Dispatch
154.2350 = Whitehall Fire (F-2)
33.4400 = North Whitehall Fire
154.0100 = Fogelsville Fire Company
(Repeater for Lehigh Co. Fire Frequencies)
154.2050 = Wescosville Fire Company
154.2200 = Highland Fire Police
155.2650 = Lehigh Co. Ambulance to Hospital (A-1)
155.0400 = City of Allentown Ambulance
462.5500 = Catasaqua Ambulance
155.2950 = Cetronia Ambulance Mutual Aid (F-4)
154.5150 = Slatington Ambulance
154.3400 = Northampton County Fire Dispatch
154.0550 = Blue Mountain Control (F-2) Fire/Medical
159.7950 = Life Support Ambulance (VHF-1)
463.7750 = Life Support Ambulance (UHF-2)
462.9500 = Flight Ops. - Berks & Carbon Counties (Med #9)
462.9750 = Flight Ops. - Lehigh, Northamtpon & Schuylkill
(Counties Med #10)
158.7750 = Lehigh County Police (F-3) Information
155.8050 = Lehigh Co. Sheriff & Schuylkill Co. Police Disp.
159.4500 = Emmaus Police (F-1)
156.2100 = South Whitehall Township Police
158.7900 = Allentown Police (F-1)
155.0400 = Allentown Police (F-3)
155.4750 = National Police Emergency Frequency

From an anonymous reader, we have the following information:

33.780 = Tioga and Clinton County Fire
45.620 = Tioga County Police Department
33.980 = Potter County Fire
33.840 = Tioga County Fire
33.880 = Potter County Fire

The PA State Police in Tioga County use Channel "B"	Base	155.670	Mobile	155.910
The PA State Police in Potter County use Channel "A"	Base	155.580	Mobile	155.790

That's it for now, have a Merry Christmas and a HAPPY NEW YEAR!

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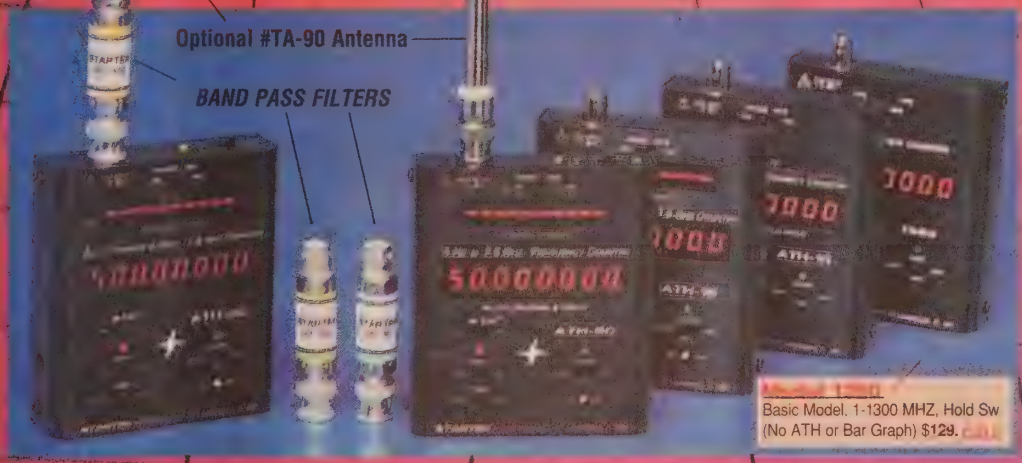

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SIGNAL BAR GRAPH	NO	YES	YES	YES
LOW BATTERY IND.	NO	YES	YES	YES
ONE-SHOT & RESET	NO	OPTIONAL	YES	YES
HI-Z LOW RANGE	NO	NO	NO	YES

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#P-110	200 MHZ 1X-10X Probe	$25
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#DC-10	Direct, 50 OHM Probe	$25
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PENNSYLVANIA
Continued from previous page

PHILADELPHIA - Louis Campagna, Post Office Box 52434, Philadelphia, PA 19115

Hello again, and welcome to the Philadelphia column. Let's see what's new around town. Word has it that the Chester County public safety communications center officials are planning to move to 800 MHz. E. F. Johnson has recently been awarded the 800 MHz trunking contract for the radio communication system. E. F. Johnson incorporates the "LTR" format of trunking.

METRO TRAFFIC CONTROL

Metro Traffic Control, AKA Shadow Traffic, has recently moved their production studio/operations center from City Avenue to Main Street in the Manayunk section of Philadelphia. They have also relocated their F-1 repeater to the antenna farm in the Roxborough section of the city. Air units and spotters can be heard on either frequency. F-2 usually carried direct feeds to local radio stations. Metro Traffic reports can be seen on weekday mornings on NBC Channel 10 (WCAU-TV).

F-1 = 450.5875 **PL 162.2** F-2 = 450.8500 **PL 97.4**

TOWN WATCH PATROLS

There's been some really hot activity with townwatch groups in many of the Philadelphia neighborhoods lately. Many of these groups can be heard operating on VHF/UHF bands especially on the GMRS frequencies. Don't forget to search through the UHF business band during the weekend evenings. You'll be surprised to hear what's active. Some groups surprisingly conduct their operations on a very professional level. Here's two you might try: Bustleton-Bowler Townwatch = 462.625 = (DPL) = 3 digit Identifiers & Rhawnhurst Townwatch = 462.675 = **(PL 91.5)** = 15xxx Identifiers

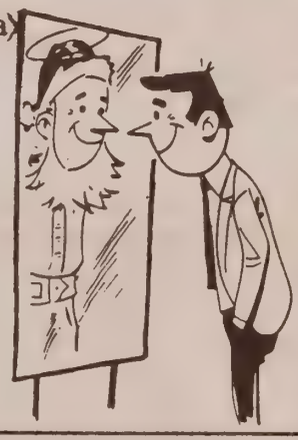
PHILADELPHIA FIRE DEPARTMENT PL TONES

In the last issue of the PHILADELPHIA column, we mentioned that the Philadelphia Fire Department was using **PL tone 88.5** on a couple of their frequencies. It has now been determined that this PL tone is being used on ALL the fire department frequencies. Well, it's been a great first year as the NESN/Philadelphia column continues to be part of NatScan. I hope our regular readers will continue their support so that we can provide others with interesting scanner related information for our coverage area. I hope all our readers have a Merry Christmas!

PHILADELPHIA TOURIST/TERRORIST FREQUENCIES

NESN Editor, Les Mattson, has a hobby of preparing disaster scenario possibilities for the Philadelphia/South Jersey area. Believe it or not, Les has a bank he calls Philadelphia Tourist/Terrorist Frequencies. Here's some of what the bank includes:

453.4500 = Philaladelphia International Airport Police
164.7250 = Independence National Historic Park
164.4250 = Independence National Historic Park
166.7875 = Independence National Historic Park
168.4500 = Independence National Historic Park
464.5250 = Academy of Fine Arts (Philadelphia)
464.8750 = Academy of Natural Sciences
464.8750 = Philadelphia Museum
501.8875 = Philadelphia Zoological Society
151.6850 = Philadelphia Zoo
501.8875 = Philadelphia Zoo Society
42.9600 = Sheraton Airport Inn
464.6750 = Girard Estate (Philadelphia)
464.2750 = Spectrum
153.8150 = Philadelphia Library
154.9650 = Philadelphia Fire (Subway Fires)



453.8500 = Philadelphia Int. Airport Operations
163.1500 = Independence National Historic Park
164.4750 = Independence National Historic Park
168.2500 = Independence National Historic Park
172.4000 = Independence National Historic Park
464.5750 = Academy of Fine Arts (Philadelphia)
451.4750 = Franklin Mint (Chester, PA)
462.4250 = Franklin Mint (Franklin Center)
151.6550 = Philadelphia Zoo
463.4875 = Zoological Society of Philadelphia
463.5375 = Zoological Society of Philadelphia
464.3000 = Longwood Gardens (Kennet Square)
464.5000 = Philadelphia Convention Center
464.9500 = Specta-Guard Security
464.9750 = Philadelphia Stock Exchange
153.9500 = Philadelphia Fire (Multiple Alarms Only)

PENNSYLVANIA

Continued from previous page

WESTERN - By Dan Ruhe, 607 Evergreen Street, Johnstown, PA 15904

(This column will cover all counties not covered by the Philadelphia column and the counties covered by the Eastern Pennsylvania column.)

Hello everybody, I hope everyone is winterized and ready for ugly cold stuff. Since the mailbox has been empty, I think we'll take a look at Indiana County and with hunting season upon us, I'll list the Pennsylvania Game Commission frequencies since they will be earning their money now.

33.7000	Indiana County Fire Dispatch	33.9400	Indiana County Fire Operations
33.6800	Indiana County Fire Operations	33.6200	Indiana County Fire Operations
33.9600	Indiana County Fire Operations	155.2200	Indiana EMS Dispatch
155.3250	Indiana Ambulance to Hospital	155.0100	Indiana County Police
155.0700	Indiana County Police	155.4300	Indiana County Police
155.7900	Indiana County Police	154.6950	PA State Police (Indiana Base)
156.1500	PA State Police (Mobile)		

Indiana County shares most of it's frequencies (all services) with neighboring counties. You may hear Somerset on 33.680 and Monroeville Police on 155.4300, etc.. Now to the PA Game Commission. Over the past several months, they have expanded the radio system, this was to help eliminate the crowded frequencies they were operating on. I recommend monitoring all the frequencies until you determine which frequency your regional office has moved to.

PENNSYLVANIA GAME COMMISSION

44.6400 PA Game Commission	44.6800 PA Game Commission	44.7600 PA Game Commission
44.8000 PA Game Commission	44.8400 PA Game Commission	44.9200 PA Game Commission
44.8800 PA Game Commission Mobile/Mobile		45.0000 PA Game Commission

Well, that should do it for this installment of Western Pennsylvania NESN. Please feel free to drop me a line, I'm open for topic suggestions. Have a Safe and Happy Holiday and don't forget the Designated Driver. Dan

CAROLINAS

This column will cover the States of North and South Carolina

CAROLINAS - By Richard J. Wells, 105-2B Arbor Way, Cary, NC 27513

And now, for some **"creative geography"** by our editor, Les Mattson, here is the CAROLINAS column.

Here's some of my favorite North Carolina frequencies that I hope you might be interested in reading:

42.6000 = N. C. State Police, Raleigh	42.6600 = N. C. State Police, Raleigh	154.1900 = Wake Co. Fire, Raleigh
155.5200 = Wake Co. Sheriff, Raleigh	155.5650 = Wake Co. Sheriff, Raleigh	858.9875 = Cary Police Department
860.9875 = Cary Police Department	155.0850 = Cary Fire Department	155.1600 = Durham Co. EMS
462.9500 = Wake Co. EMS, Raleigh	855.9875 = Cary Police Department	856.9875 = Cary Police Department
857.9875 = Cary Police Department	859.9875 = Cary Police Department	450.5875 = WHLQ Traffic, Raleigh

All the above frequencies are very active, so if you're ever in the Raleigh/Durham area, give these a try. The Cary Police Department frequencies use 857 and 858 alternately as the data channel and that usually rolls around about 11 PM. During the day, the Cary Police frequencies are shared with the Cary Public Works people.

I received a request from BOB LANGLEY in Georgia, who likes to monitor military aircraft frequencies. He is interested in active frequencies for the aircraft operating out of Seymour-Johnson Air Force Base. He has some information on the AV-8B Harriers that fly out of Cherry Point MCAS and would like to trade with anyone who can help. If you are interested, please contact me and we'll see if we can get everyone taken care of. I do not monitor military aircraft bands, (maybe this is my chance to start?) so I can't help Bob, but I'm sure there's someone out there who can! Have a nice holiday!

DELMARVA

This column will cover the States of Delaware, Maryland, Virginia, West Virginia and the District of Columbia.

DELAWARE = By Jack McCartan, Post Office Box 9453, Newark, DE 19714

Hello, fellow Diamond Staters, and welcome to the November/December column. This is YOUR column, folks, if you've got any questions, please feel free to drop me a line--I'll do what I can to help you out. I got a letter from our good friend Alan Henney of Takoma Park, MD. Alan states that while on vacation in Rehoboth Beach in June, the Rehoboth Beach Police Department sealed off a 2-block area after a shop keeper thought she saw a man armed with a gun inside the storeroom of her store. The state police Special Operations Response Team (SORT) was called in, and after three hours and two sweeps later, no gunman was found. Alan reports that the frequencies used that day included:

154.7400 = Rehoboth Beach Police Dept. (F-1)
154.8600 = Delaware State Police units
154.8750 = Barricade Detail
155.4600 = SORT units

It's funny, I was also in Rehoboth that day, my PRO-43 was being charge up, since I was using it the previous day. It never fails!! A big "Thank You" goes out to Alan for this terrific input. There are lots of activities going on during the fall in Delaware. Starting in mid-September, the Delaware Saenerbund holds its annual Oktoberfest celebration. The New Castle County Police (NCCPD) are always out in large numbers for this event to maintain order and traffic control. Monitor the NCCPD on their channel lineup:

NEW CASTLE COUNTY POLICE DEPARTMENT FREQUENCIES				
F1/F2 = 156.165	F3/F4 = 155.115	F5 = 155.490	F6 = 158.805	F7 = 154.860

Also monitor the CB channels as well, some volunteers use CB's to chat back and forth regarding traffic and parking woes. Also, many of the vendors use wireless mikes, be sure to check out this band as well.

The fall also brings the return of University of Delaware football. Check out the action by monitoring the U of D Police on 501.6625 and 501.5125. The Newark Police are usually on hand, too, so be sure to punch in 155.250 (F-1). Both of these agencies are quite busy throughout the day during home football games!

"Mischief Night," the night before Halloween, is traditionally a very busy night for the police. Be sure to monitor ALL of the local public safety agencies for non-stop action during this evening. Include the itinerants on Mischief Night as well, as many local neighborhood watch organizations step up their patrols. Monitor 151.6250, 154.5700 and 154.6000, they are the most active frequencies, but be sure to program in the rest of the itinerants as well. You'll be amazed at how busy they are on Mischief Night! Pranksters are out in force and they keep our friends in blue very busy.

Down in Sussex County, the Punkin' Chunkin" has become a tradition. It has now been expanded to a two-day event with international exposure, including press coverage from CNN. The event is held at the Lewes Aerodome, on Route 1, just north of Lewes. Be sure to take your scanner along if you go. And take lots and lots of beer (just designate a driver.) I've never been to this event, but I hear that it is a really great time. If any of our readers go, let us know what frequencies are in use. I bet that the Delaware State Police frequencies would be in heavy use, as well as the itinerants. A word of caution--make sure your car insurance is paid up to date if you drive down there. Many a car windshield has been shattered by airborne pumpkins that are hurled by these homemade contraptions.

The Elsemere Police Department, as you may know, is now being dispatched through RECOM on 156.165, as "900" units. Their old frequency, 155.010 is now being used as a "side channel" of sorts. Many times Elsmere PD will use it for what sounds like non-routine communications. So, be sure to keep this one plugged into your scanner at all times. That's all for this month, folks. I hope you are all doing well as we near that busy Christmas season again. Be good and maybe Santa will bring you a new scanner! Have fun, see ya next time!

EVERY TIME THE LITTLE BOY SAW HIS GRANDFATHER, HE WAS ALWAYS SAYING, "MAKE A SOUND LIKE A FROG, GRANDPA." THIS WENT ON FOR YEARS AND THE GRANDPA FINALLY GOT SICK OF HEARING IT. "WHY DO YOU CONSTANTLY ASK ME TO MAKE A SOUND LIKE A FROG?" HE ASKED HIS GRANDSON. THE LITTLE BOY REPLIED, "BECAUSE GRANDMA SAID THAT WHEN YOU CROAK, WE'RE ALL GOING TO HAWAII!"

DELMARVA

Continued from previous page

MARYLAND - By Art Audley, Post Office Box 74, La Plata, MD 20646-0074

Greetings! You've arrived just in time to tour Maryland via bus, light rail (AKA trolley cars) and mass transit. A recent article in the "Washington Times" announced the groundbreaking for the Green Line of Washington's Metro system, to extend to Branch Avenue in Prince George's County, MD. Metrorail operates five lines designated by color codes. Four of the five lines run in Maryland as well as in the District of Columbia and Virginia. You can monitor Metrorail on the following frequencies:

160.2600 = Red Line
161.3850 = Metro Police
161.2350 = Channel #1
160.2600 = Blue, Green & Yellow Line
160.3800 = Orange & Blue Lines
161.4150
160.6050 = Yard Channel #2
160.0250 = Maintenance

In Baltimore, the light and heavy (subway) rail systems use:

160.3950 = Subway (Road)
161.0100 = Light Rail-Yard
161.0850 = Subway pullouts/road channel
161.5650 = Subway and light rail maintenance
160.9050 = Light Rail-Yard
161.4750 = Shop - Wabash Road

Baltimore's MTA uses the following:

494.3375 = Lines 1-10
495.0375 = AVL Buses (50)
494.7625 = Police (Bus & Rail)
494.6375 = Lines 37-86 & UP
494.6125 = Lines 20-36
44.4600 = MTA Mobility Vans
494.9625 = Bus Supervisor/Maint.
494.8125 = Data AVL for 50 buses
494.4375 = Lines 11-19
495.1625 = MTA Police

Well, that's enough riding around for this issue! If anyone has any MARC (Maryland Area Rail Commission) frequencies, I'd appreciate hearing from you. Happy Holidays to all! Until next issue.....

VIRGINIA - By Van Reynolds, 13 Holiday Drive, Hampton, VA 23669

In this issue, I would like to cover the public safety radio system of my hometown, Hampton. This may also help those of you who live in an area that has a G. E. trunked radio system in use. The fine people at G. E. keep trying to figure out ways to irritate us scanner listeners with beeps and screeches, hoping we will stop listening in. G. E. also tells their customers that no one can follow a conversation on their radio system. Well, all I have to say is "Yes we can!"

Hampton has a G. E. 800 MHz trunked system with all the bells and whistles, literally. They have 10 repeaters, all of which are not presently being used. Each half of a conversation is on a different repeater. Every time a radio is keyed up, a repeater is turned on and the person talks. When that person is finished talking, the microphone button is released and anti-scanner beeps are transmitted on the tail of the repeater. This locks your scanner up for about 5 seconds, so you do not hear the other side of the conversation on the next repeater. The key to successful monitoring is to find the order in which all of the repeaters are trunked and program them in your scanner. Then use the scanner in the manual mode with you pressing the manual button at the end of each transmission.

HAMPTON, VA. TRUNKED SYSTEM IN TRUNKED ORDER:

1). = 860.7625
2). = 859.7625
3). = 858.7625
4). = 857.7625 *
5). = 856.7625 *
6). = 855.9625
7). = 855.7125 *
8). = 855.4625
9). = 854.9625 #
10). = 854.7125

NOTES:

* = Not presently being used and can be left out of your scanner, but keep a check on them.
# = Presently control or "handshake" frequency. It will change to another frequency every few months.

For example, with your scanner in the manual mode and the dispatcher calls a unit on #1, you will hear the unit answer on #2. Then, you will hear the dispatcher give the type of call on #3 and finally, the unit will clear on #4. This is only if there are only two people on the trunked system. If more than two people are talking, you will have to be quick on pressing the manual button to keep up with the first conversation. Have a safe and sober holiday!

IF YOU REALLY WANT THE WORLD TO BEAT A PATH TO YOUR DOOR, TRY TAKING A NAP.

FAR SOUTH

This column will cover the States of Florida and Georgia

FLORIDA = By Gene B. Kelley, c/o National Scanning, P. O. Box 360, Wagontown, PA 19376

Welcome to the Florida regional column. I'd like to start off with some miscellaneous Florida frequencies if I may.

163.4875 = MacDill AFB Security
44.8000 = Florida Marine Patrol
45.0000 = Florida Marine Patrol
45.4000 = Florida Marine Patrol Repeater

151.3850 = Florida Game & Fish Commission
151.1600 = Florida Game & Fish Commission
160.4250 = Florida Game & Fish Comm. Repeater

154.4300 = Tampa Fire Dept. Primary Dispatch Ch. 1
154.2200 = Tampa Fire Dept. Secondary Disp.. Ch. 2
153.8300 = Tampa Fire Dept. Training Fireground Ch. 3
463.1500 = Tampa Paramedic Units MED-7

TAMPA POLICE DEPARTMENT

453.5500 = PL **94.8** = Channel #1 = Dispatch
453.7000 = PL **94.8** = Channel #2 = Dispatch
453.8000 = PL **94.8** = Channel #3 = Information
453.8500 = PL **94.8** = Channel #4 = Special Ops..
453.7500 = PL **94.8** = Channel #5 = Dispatch
453.8750 = PL **94.8** = Channel #6 = Dispatch
453.3250 = PL **94.8** = Channel #7 = Dispatch
453.5000 = PL **94.8** = Channel #8 = Info/Tactical

Simplex Tactical = 460.1125, 460.5125, 458.2625, 458.5875, 458.6125, 458.7375, 458.9625, 458.9375, Channels 9 through 16.

That's it for this issue of FAR SOUTH, have a very Merry Christmas and a Happy New Year!

GEORGIA = By Adam Fouche, 94 Williford Street, Commerce, Georgia 30529

HAM RADIO MONITORING

Ham radio can make for some very interesting monitoring. Listening to hams chat can be very informative too. For example, hams often relay important information during times of disaster. They are sometimes the only means of communications. Thanks to Chris Tiller for much of the following. If you want to monitor ham radio in the Georgia area, here are a few frequencies to try:

147.2250 = Commerce Repeater
146.7600 = Stone Mountain
147.1200 = Clarksville
146.7300 = Albany
145.4100 = Brunswick
147.3000 = Rome
145.1300 = Valdosta
147.1500 = Cumming
146.6700 = Gainesville
145.3500 = Atlanta
147.1800 = Baldwin
146.9400 = Augusta
145.3100 = Columbus
146.7000 = Savannah
146.8500 = Warner Robins
146.7450 = Athens
145.4100 = Atlanta
147.3300 = Toccoa
145.2900 = Augusta
146.6600 = Macon
147.2100 = Savannah
444.4500 = Chateau Elan

I trust you liked my column, I look forward to writing it every issue. Please feel free to write to me with any corrections, comments, suggestions, frequencies, etc. Until next time, have a Merry Christmas!

WHEN IT TAKES LONGER TO REST THAN IT DID TO GET TIRED, THEN IT JUST MIGHT BE THAT WE HAVE STARTED DOWN THE JOURNEY ON THE OTHER SIDE OF LIFE'S ROAD.

Central United States

Alabama, Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Nebraska, Ohio, Oklahoma, Tennessee, Texas, Wisconsin

Send your frequency information to:
Laura Quarantiello, National Scanning, Box 360, Wagontown, PA 19376

INDIANA

This issue we continue with a list provided to us by Mark Adams. Mark, if you remember, is keeping us up to date on Knox County/Vincennes area frequencies. In this list you'll find an ecletic mix, including rail, broadcasting, universities and fire departments. There's enough here to keep you busy for awhile. If you can add anything, drop us a line.

158.2500--Southern Indiana Gas and Electric
158.2500--Southern Indiana Gas and Electric
158.3850--JMR Farms
158.3850--Maurice Vieck and Sons Farm
158.8200--City of Vincennes
158.8800--Knox County
158.9100--Knox County
160.2300--CSX Transportation
160.3200--CSX Transportation
160.3950--CSX Transportation
160.7850--CSX Transportation
161.2650--CSX Transportation
161.3700--CSX Transportation
161.5200--CSX Transportation
161.6700--Vincennes University
161.6700--Vincennes University
161.7300--Old Northwest Broadcasting
161.7600--Old Northwest Broadcasting
453.1000--City of Vincennes
453.1500--City of Vincennes
453.8250--Vincennes Housing Authority
453.8250--Vincennes Housing Authority
454.3250--Indiana Paging
454.6750--Ameritech Mobile
454.9250--Ameritech Mobile
460.6250--Johnson Township Volunteer Fire
460.6250--Johnson Township Volunteer Fire
460.7750--Golden Rule Insurance
460.7750--Tracy Electric
461.2000--Vincennes Tractor
464.5250--Vincennes University PE Complex
464.5250--Vincennes University PE Complex
465.6250--Johnson Township Volunteer Fire

ILLINOIS

Chuck Watson wandered into the Chicago Museum of Science and Industry and turned on his frequency counter. He found that they were using 464.475 Security, 464.455 Guides, and 464.725 Maintenance.

Corrections to an earlier issue came our way from Scott Menke (IL 9 AAV). Scott advises that 155.370 does belong to Elgin Police, but is infrequently used. Updated freqs for Elgin PD are 855.2125 Ch.1, 859.9875 Ch.2, 155.130 Data or Low Band Channel, 156.150 Detectives. 154.265 belongs to NIFERN, the North Illinois Fire Emergency Radio Network and is used by many fire agencies for mutual aid. Elgin Fire uses 460.575/465.575. 153.830 is Elgin FD fireground, dispatch is on 154.430. Sherman Hospital uses 155.40, all MED channels and 461.3375 Security, 461.575 Maintenance. 155.835 is no longer used by city buses, they're on a trunked system now. 42.50 belongs to State Police car to car, 42.620 base, 42.68 mobile, 154.695 Hi Band, 155.460 Hi Band. Other area freqs are: Elgin Public Works 154.085, S. Elgin PD 155.685, S. Elgin PD 154.770, S. Elgin Public Works 153.860, Illinois State PD Toll Road District 15 is 855.2375 PD, 856.2375 Maintenance.

IOWA

"A friend of mine said that the Dairy Queen in Cedar Rapids is using some new radios, so I checked it out," said Mark Ross (IA 0 UZF) "They transmit on 903.250, with the base on 920.250. They had been using 457.575 and went to this. Maybe the radios wore out, or too much interference on 154.6 which was the uplink on the old ones. The units are boxes with internal antennas."

Aaron Mitchell in Manchester thought he would pass along a few frequencies to fatten up this column. Thanks, Aaron, we sure can use them.

154.355--Delaware County Fire
154.280--Fire Mutual Aid
155.220--Delaware County Memorial Hospital
158.775--Delaware County Memorial Hospital
154.860--Manchester Police F1
155.310--Manchester Police F2 Base
155.910--Manchester Police F2 Mobile
155.565--Iowa State Patrol DPS Area 3
155.700--ISP LEA Area 3
155.430--ISP Car to Car
155.505--ISP Aircraft
155.445--ISP CIS
155.370--ISP Point to Point
155.475--Police Mutual Aid
155.970--DOT Weigh Scales

KENTUCKY

Larry Coppala (KY 4 ACT) in Fairdale sets us straight about some listings in the July/August issue. 154.160 (Pleasure Ridge Park), 154.370 (Fairdale), 154.250 (Ferncreek) are all used by county volunteer fire department, instead of city of Louisville, as we reported. These freqs are shared by the VFD's in the county as needed and Larry says there are 23 more freqs for the VFD, Hazmat, Mutual Aid, etc. "We have 3/4 of a million people in this county." Larry tells us that he has a 2,000 channel scanner, 1,000 channel scanner, and a 200 channel handheld. He's been at this since 1977 and is also a ham operator. Thanks, Larry!

Bo Watson sent along his list for Fort Campbell. "It's not complete, of course. There are many more freqs for you to find."

30.2000--Air Tactical
32.5000--Range Control Primary
33.2000--Staff Weather Office
36.9000--Air Medevac/Dustoff
49.7000--EOD
49.9500--Range Control Primary
75.2500--Range Control Alternate
118.100--Army Airfield Approach
121.800--Army Airfield Ground
126.200--Army Airfield Approach
134.350--Army Airfield Approach
138.800--Army Airfield
139.075--Post Guards
139.175--Public Works
139.425--Division Transport
139.900--Army Airfield Approach/Departure
140.275--Post Guards
141.200--DPW
141.475--Housing
142.325--DPW
142.900--Pilot to Dispatcher
143.300--Sabre Army Heliport
143.400--Eagle Radio
148.515--Transport
148.590--Range Maintenance
149.850--Sabre Army Heliport
163.290--EMT Dispatch
163.5875--Military Police
164.100--Military Police Primary
164.200--EMT Dispatch
165.0875--MP CH 3
165.1625--MP RAMP
169.450--MP CH 2
169.990--Range Inspectors
173.4875--Motor Pool
173.5875--Fire/Crash
173.590--Fire/Crash
174.300--MP
236.600--Airfield Arrival
239.400--WX Voice/Data air to ground
239.800--WX Voice Data ground to air
241.000--Control Tower
242.400--Eagle Control
246.600--Airfield Approach/Departure
255.600--Departure
267.300--Sabre Army Heliport
275.800--Ground Control
280.900--Sabre Army Heliport
302.200--Airfield Range Radio Service
303.000--ANG Secondary
344.600--Airfield Ground to Air WX Comms
367.300--Eagle Range Radio
368.300--Airfield Clearance Delivery
372.200--Airfield Pilot to Dispatcher
462.025--Fire Inspector 470.8875 MP

LOUISIANA

This month we continue NESN Maryland editor Art Audley's list for the parishes of Louisiana. Art was kind enough to pass these along to us for your enjoyment.

155.565--Oakdale Sheriff - Allen Parish
122.200--De Ridder Flight Service - Beauregard Parish
122.800--De Ridder Airport
146.850--De Ridder Amateur Repeater
151.530--Beauregard Electric
154.310--De Ridder Fire
154.815--De Ridder Police
154.980--De Ridder Local Government
154.995--Beauregard Volunteer Fire
155.190--De Ridder Police 8
155.205--De Ridder Hospital
155.380--De Ridder Ambulance
155.955--De Ridder Mayor
158.790--Beauregard Sheriff
154.235--Lake Charles Fire - Calcasieu Parish
155.010--WestlakePolice
155.525--Lake Charles Police
155.595--Calcasieu Sheriff 2
155.790--Natchitoches Sheriff - Natchitoches Parish
155.520--Sheriff's Offices - Sabine Parish

MICHIGAN

Paul in Royal Oak passed a clipping along telling of the move by Royal Oak Police dispatchers into permanent quarters. The new radio room contains a $420,000 Motorola system, which includes satellite receivers and antenna towers throughout the city. On the wish list is a Computer-Aided Dispatch system. Royal Oak PD dispatches on F1 155.010, F2 155.940, Royal Oak Fire 154.340.

Ira also dropped a clipping to us that tells how the State of Michigan House republicans are requiring the chamber's nine sergeants at arms to communicate while on the House floor. Using wrist microphones and earplugs right out of Dick Tracy, the team can talk without disturbing House sessions. Sergeants at arms also have a radio link directly to the state police in case of emergency.

Ira also informs us that Madison Heights is gearing up for a high-tech public safety dispatching system, now that the City Council has approved the purchase. The new system should be up by the time you read this.

The Michigan State Police are Joe Deegan's target and he sent us his list: 42.02 MSP Detroit Post 29, 42.58 MSP Weight scales, 42.64 MSP Howell Post 12, 42.68 MSP Northville Post 21, 42.74 MSP Statewide, 42.86 MSP Mt Clemens Post 24 Romeo Post 22, 42.94 MSP Pontiac Post 27.

Tom Walker claims that there's "never a dull moment with Detroit Police. My favorite frequencies are Tactical Services channel F-11 and the Special Events channel F-5." Tom passed us his list for DPD:

453.350--F-1 Precincts 1 (Downtown), 3 (Vernor), 4 (Lafayette-Green), Fox Theatre
453.750--F-2 Precincts 2 (Schaefer), 10 (Livernois)
453.300--F-3 Precincts 7 (Mack), 13 (Woodward), 16 (City of Highland Park), Belle Isle (Harbormaster), New Center, Masonic Theatre
453.800--F-4 Precincts 11 (Davison), 12 (Palmer Park)
453.550--F-5 Primary Car-to-Car, Special Events 453.250 F-6 Precincts 6 (Plymouth), 8 (Grand River)
453.700--F-7 Precincts 5 (Jefferson), 9 (Gratiot) 453.325 F-8 Detective Desks
453.375--F-9 Alternate Car-to-Car, Tiger Stadium units 453.425 F-10 Tactical
453.875--F-11 Citywide Tactical Units
453.925--F-12 Command, Phone patch
453.975--F-13 Surveillance, Detectives
453.775--F-14 Cobo Hall, Renaissance Center, City County Bldg, Greektown, Joe Louis Arena, Hart Plaza

MISSOURI

Can you believe that there's actually a hockey fan that will admit that the game isn't everything? Sam Rickards says that the game is half the fun, but scanning at Kiel Center in St. Louis is the other half. "The Blues bench has three cables running from it down into the bowels of Kiel Center. Two of the cable connectors are, it appears, for audio communications and one is for a computer. From what I could see, the visiting bench has no such cables. Last season, during the Blues-Canucks first-round series, I pulled in the Vancouver coaches on 49.83 MHz. I take my PRO-34 every time I go to a game."

Our friend Pete Russell (MO 0 HGR) keeps his ears on the Highway Patrol. "My brother works District C, so I like to listen, especially when he's out on patrol." Districts C, I and D use the following frequencies:

42.22--F1/F7/F11
42.06--F2/F8/Car to Car
42.32--F3/F5/F12
42.12--F4 Car to Car
42.38--F6 Car to Car
42.02--F9/F10, Car to Car Tac
155.730--Sheriff Intersystem
154.905--Extender
154.935--F3 Tac
154.665--F4 Tac
44.86--Mobiles
45.06--Mobiles
154.935--Tac
154.665--Tac
42.06T/42.22R--Troop B Macon F1/F7 dispatch
42.38T/42.32R--Troop C Kirkwood Rural F5 dispatch
42.06T/42.22R--Troop C Kirkwood Metro F1/F7 dispatch
42.12T/42.32R--Troop C Flat River F3 dispatch
42.06T/42.22R--Troop E Poplar Bluff F1/F7 dispatch
42.12T/42.32R--Troop E Siketon F3 dispatch

Mark Mayhew reports that Kansas City now has three riverboat casinos in operation. "I've found that the freq for Sam's Town Slots is 463.8875. Mostly jackpot payout and slot machine reports on this frequency. President Riverboat Casino in St. Louis is using these frequencies: 461.200, 461.700, 461.900, 463.650, 463.675, 464.150. Harrah's North Kansas City casino is at 460.7125, mostly routine security calls, escorts for money handlers, assistance with customers, etc."

OKLAHOMA

For a great listing of Oklahoma Highway Patrol freqs, look no further that our pal Derek Carson. This is what Derek has in his scanner and it looks to be extremely complete. Try these numbers out and let us know how you fare.

42.70000--OHP Troop L/B F1 Car to Car
44.90000--OHP F2 45.22000 OHP F3 Car to Car
45.18000--OHP F4 154.9050 OHP Extender
154.9200--OHP Extender Backup
159.2100--OHP Extender Input and Alternate
138.0500--OHP Air Units
465.5625--OHP Extender
465.3875--OHP Extender
154.6950--OHP Car to Car
44.7000--Oklahoma Highway Patrol
44.9000--Oklahoma Highway Patrol
45.1000--Oklahoma Highway Patrol
45.1800--Oklahoma Highway Patrol
45.2200--Oklahoma Highway Patrol
138.0500--OK Hwy Patrol Backup
138.0500--Okla. Highway Patrol (Air Support)
154.6800--Oklahoma Highway Patrol
154.6950--Okla. Highway Patrol (Car to Car)
154.6950--Oklahoma Highway Patrol Repeater
154.7100--Oklahoma Highway Patrol
154.9050--Okla. Highway Patrol CHIPS Detector
154.9050--Oklahoma Highway Patrol Repeater
154.9200--Oklahoma Highway Patrol Repeater
154.9350--Oklahoma Highway Patrol Repeater
155.3100--Okla. Highway Patrol (Base)
155.3100--Oklahoma Highway Patrol Repeater
155.4450--Oklahoma Highway Patrol
155.4600--Oklahoma Highway Patrol
155.4750--Okla. Highway Patrol SWAT Team TAC
159.2100--Oklahoma Highway Patrol Repeater
859.2325--Oklahoma Highway Patrol Troop A
860.2325--Oklahoma Highway Patrol Troop A
861.2125--Oklahoma Highway Patrol
861.2325--Oklahoma Highway Patrol Troop A
862.2125--Oklahoma Highway Patrol
862.2325--Oklahoma Highway Patrol Troop A
863.2125--Oklahoma Highway Patrol
864.2125--Oklahoma Highway Patrol Main
865.2125--Oklahoma Highway Patrol

OHIO

The new 800 MHz digital system in Akron is online. The system uses the following frequencies, but is billed as unscannable because of digital technology. Jim Moats (OH 8 AOH) in Ravenna said that one of the trunked freqs will be used by MDT's. Jim has noticed very limited use of APD's former UHF dispatch freq of 460.375 and isn't sure if their old UHF channels 460.325, 460.050, 460.425 and 460.500 are still in use. Akron Fire, due to use the 800 system, is still being heard on 460.600 and 462.975 for EMS calls. The trunked system uses 851.3125, 851.4875, 852.0875, 852.3625, 852.3875, 853.1125, 853.3625, 853.5125, 854.3625, 854.4875, 854.5125, 855.0875, 855.3125, 855.5125, 855.3625, 856.0125.

Jim also noticed that the public works group is not in the digital format. Analog voice is heard on 851.3125, 854.3625, 854.5125, 855.0875, 855.3125, 855.5125, 856.0125. "I've herad digital transmissions on some of the analog freqencies as well. On 853.2125 I've heard Summit County Fire departments. I believe that this is a simulcast of 33.860. 853.2125 is licensed to Summit County as well as the city of Green. The Portage County Jail is now using a repeater on 155.490 for operations and the Portage County Sheriff is on 460.3625 and 465.3625, simulcasting F1 on 156.210."

Nick Langan in Aurora sent us these frequencies for the Cleveland area.

151.355--Ravenna
151.340--Brecksville
151.415--Cleveland
151.430--Streetsboro
159.375--Streetsboro
453.100--Richfield
453.537--Akron
151.370--Brecksville
159.405--Cleveland
151.310--Solon
123.300--Chardon
127.500--Chardon
118.300--Cleveland
118.600--Cleveland
120.100--Cleveland
124.000--Cleveland
134.750--Lorain
170.765--Akron
152.330--Cleveland
35.220--Ravenna
454.150--Beachwood
152.150--Cleveland
152.150--Akron
158.100--Twinsburg
161.070--Hudson
166.375--Brecksville
150.230--Akron
146.895--Atwater
145.390--Kent
147.075--Streetsboro
156.610--Hudson
145.310--Sagamore Hills
147.090--Barberton
147.360--North Royalton
147.060--Chagrin Falls
146.760--Cleveland

Sam Walton (OH 8 QUN) says that he listens to OHP all the time and would like to share his list with us.

42.4200--Ohio Highway Patrol Alternate
42.5600--Ohio State Patrol
44.7400--Ohio State Patrol
44.8600--Ohio State Patrol
44.9400--Ohio State Patrol
45.0200--Ohio State Police
45.1000--Ohio Highway Patrol Alternate
45.2600--Ohio State Patrol
154.9350--Ohio Law Enforcement Agency Radio Network
460.0500--Ohio State Patrol
460.1750--Ohio State Patrol

TENNESSEE

Charles Gossett over in Nashville passed on some information about the Tennessee Wildlife Resources Agency. TWRA officers are now patrolling the part of the Cumberland River that includes Riverfront Park. The enforcement presense on the water is designed to remind boaters to be careful. More recreational boats than ever are taking to the water and traffic is getting heavy. The new boat patrol will make safety checks on boats, look for evidence of intoxication in sailors and cite for safety violations. They are on call 24 hours per day, seven days a week, but enforcement will mainly take place during evenings and weekends.

155.370--Tennesee Sheriff's Net
155.850--Tennesee Sheriff's Net
154.755--Southeast Tennessee Mutual Aid
154.770--Southeast Tennessee Mutual Aid
460.400--UHF Mutual Aid
155.025--Tennessee Emergency Management Agency
151.280--Tennessee Wildlife
151.050--Tennessee Air National Guard
156.210--Tennessee Highway Patrol
158.730--THP Dispatch
159.090--THP
155.475--THP
42.26--THP
42.28--THP Car to Car
42.42--THP Dispatch

Steve Jackson, who lives near the Tennessee Aquarium and visits often, always with scanner in hand, recently noted these frequencies in use: 461.875, 461.450, 461.675, 463.450.

TEXAS

"Greetings! I sincerely hope that all the NatScan readers are doing well," says Joseph Catalina, Jr. "Here are some frequenices for all of you. I'm almost sure that you will want to put them into your computer like I did, it comes in handy when you want to look something up. I leave my Bearcat scanner on 24 hours a day, 7 days a week, 365 days a year." Here's Joseph's list from Bank 1 of his scanner.

154.755--Tyler County Sheriff, Houston PD, Bell Co., Jasper SO
155.625--Hillsboro PD, Tyler Co. SO, Polk Co. SO, Jasper SO
155.610--Bryan and Bellmead PD
37.1800--Intercity and Area SO's
48.5000--Deep East Texas LE Ops Blue Star
154.950--Jefferson Co., Tyler Co, and Jasper SO
154.340--College Station PD
155.370--TSTC, Houston, Mesquite, Nederland, Lufkin PD, Tyler SO
155.190--A&M and Huntsville PD
155.640--Jefferson County SO
460.225--Jefferson Co. SO, Dallas, Vidor, Orange, Nederland, Lamar U, and Beaumont PD
460.250--Jefferson Co. SO 460.275 Jefferson Co. SO, Orange Co. SO, Dallas PD
460.350--Houston, Beaumont, Pt. Arthur, Orange and DFW Airport
460.500--Jefferson Co. SO, Dallas PD 155.190 Dallas, Bryan, Beaumont PD
158.970--Beaumont PD, Angelina Co. SO 460.400 Houston and Nederland PD
460.175--Beaumont PD
460.075--Beaumont PD

Joseph also provided us with dog racing and Major League Baseball freqs for his region. Gulf Greyhound Park in La Marque: 461.1375, 464.2875, 464.6375, 464.9875, 466.1375. Texas Rangers Baseball 463.7125, 464.5375 Texas Rangers Security, 464.5625 Texas Rangers Parking, 464.1125 Houston Astros.

The city of Fort Worth expanded its communications system with the addition of an ElectroCom Radio Data Controller. The existing system supports police and fire dispatch, as well as MDT's and operates on two 450 MHz channels. The city added three conventional 800 Mhz channels to expand the coverage. The ElectroCom RDC allows all sites and transceivers to be used.

WISCONSIN

A truly complete numerical listing for the state came in recently from Steve Alexander. Steve has been monitoring for six years and currently uses a BC200XLT and PRO-2035. "I love both scanners and they do very well on the many low band frequencies we have around here." Steve would appreciate any corrections or additions to this list. Just send them to us here at NatScan.

37.9000--Whitewater Veterinary Services
39.1000--Elkhorn Police
39.1000--Bloomfield Township Local Govt
39.1000--Genoa City Local Govt
39.1000--Lake Geneva Local Govt
39.3400--Elkhorn Police
39.3400--Whitewater Police
39.3400--Walworth County Police
39.3400--Lake Geneva Police
39.3400--Village of East Troy Police
39.3400--Delavan Police
39.4200--Elkhorn Police

39.4200--Whitewater Police
39.4200--Walworth County Police
39.4200--Lake Geneva Police
39.4200--Village of East Troy
39.4200--City of Delavan Police
39.4600--Elkhorn Police
39.4600--Walworth County Police
39.4600--Lake Geneva Police
39.4600--Village of East Troy Police
39.9800--Village of East Troy Local Govt
45.1600--Walworth County
45.3600--Walworth County
45.9800--Walworth County Police
46.2000--Lauderdale LaGrange Volunteer Fire
46.2000--LaGrange Fire
46.2400--Walworth County FD Fireground
46.2400--Lauderdale LaGrange Volunteer Fire
46.2400--Village of East Troy Fire
46.2400--Lyons Township Fire
46.2400--LaGrange Fire
46.2400--Delavan Fire
46.2400--Linn Town Fire
46.2400--Genoa City Fire
46.2400--Bloomfield Township Fire
46.3800--Walworth Township Fire
46.3800--Williams Bay Fire
46.3800--Fontana Fire
46.3800--Walworth County Fire
46.3800--Walworth County Fire
46.3800--Lake Geneva Fire
46.3800--Lauderdale LaGrange Volunteer Fire
46.3800--Whitewater Fire
46.3800--Village of East Troy Fire
46.3800--Lyons Township Fire
46.3800--LaGrange Fire

CANADA

We received the following list for the Ontario area anonymously in the mail. It's great and we want to pass along a big thank you to the sender. Are you out there? We'll print the rest of the list next issue.

155.1900--AMB Durham Oshawa CACC Operations
155.7750--AMB Durham Oshawa CACC Patch
153.1250--FD Durham Bowmanville
414.4625--FD Durham Fire Link
153.8800--FD Durham Local
153.8600--FD Durham Pickering, Ajax, Whitby
154.5550--FD Durham Oshawa Old Channel
866.3000--FD Durham TRU Oshawa
866.8000--FD Durham TRU Oshawa
859.3375--FD Durham TRU Oshawa
857.1375--FD Durham TRU Oshawa
857.3875--FD Durham TRU Oshawa
142.8150--PD Durham
142.5850--PD Durham
142.1850--PD Durham East
142.7700--PD Durham Provincial Common
139.6800--PD Durham Simplex
142.5900--PD Durham Sunderland
142.6200--PD Durham Tactical
143.1000--PD Durham West
150.1000--AMB Halton - Peel F1
143.3700--AMB Halton - Peel F2
149.6050--AMB Halton - Peel F3
152.0000--AMB Halton - Peel F4
143.5050--AMB Halton - Peel F5
152.3450--FD Halton Region Oakville
154.2050--FD Halton Region Burlington
154.1600--FD Halton Region Halton Hills
861.5125--FD Halton Region TRU Burlington
862.2625--FD Halton Region TRU Burlington
861.7625--FD Halton Region TRU Burlington
862.0125--FD Halton Region TRU Burlington
861.2625--FD Halton Region TRU Burlington
141.5850--PD Halton Region F5 Simplex
142.5150--PD Halton Region F2 Oakville
142.0950--PD Halton Region F3 Burlington
142.7700--PD Halton Region F4 Prov Common
142.2750--PD Halton Region F1 Halton Hills

Bearcat Radio Club 1996 Show Schedule

Feb 3-4--Tropical Hamboree, Miami, FL (Youth Expo Fairgrounds)
Feb 17-18--Orlando Hamcation, Orlando, FL
Feb 24-25--Great Lakes Division Conv., Cincinnati, OH (Cincinnati Gardens)
Mar 9-10--Charlotte Hamfest, Charlotte, NC (Merchandise Mart)
May 17-19--Dayton Hamvention, Dayton, OH (Hara Arena)
Jun 1--Nashville Hamfest, Nashville, TN
Jun 1-2--Rochester Hamfest, Rochester, NY (The Dome)
Jun--HamCon '96, Arlington, TX (Arlington Convention Center)
Jun--Seapac, Seaside, OR (Seaside Convention Center)
July 12-14-National Scanning Convention, Lancaster, PA (Host Resort)
July 13-14--Indianapolis Hamfest, Indianapolis, IN (Marion Cty. Fairgrounds)
Aug 17-18--Huntsville Hamfest Huntsville, AL (Von Braun Civic Center)
Sep--Peoria Hamfest, Peoria, IL (Peoria Fairgrounds)
Sep--Virginia Beach Hamfest, Virginia Beach, VA (The Pavillion)
Oct 18-20--MT Convention, Atlanta, GA (Airport Hilton)
Oct 26-27--Chattanooga Hamfest, Chattanooga, TN
Oct--Southwest Divisional Convention, Phoenix, AZ
Oct--Boxborough Hamfest, Boxborough, MA (Boxborough Holiday Inn)
Nov--Odessa Hamfest, Odessa, TX (Holiday Inn Center)
Nov--Fort Wayne Hafest, Fort Wayne, IN (Allen County Center)

GWSC Greater Western Scanning Club

FROM THE PRESIDENT by Michael J. Smith

Hi, scanner fans! Good to see you're still with us. We hope you're enjoying the new West section of NatScan. If you have any ideas for improvement, let us know. We listen to all your input, and we thank you for the great letters and frequencies. One hint: if you send in news clippings that have to do with an incident or information related to an agency, please send along any frequencies you monitored during that incident or any freqs belonging to the agency. Otherwise, some of the clippings are of no use to us. We welcome your stories of what you've heard and how you monitored it. Hopefully we can get a true dialogue going and make this section of the magazine really sizzle.

CALIFORNIA By Zack Benjamin

Hey, team! You gotta love it when a true scanner enthusiast sends along a sharp looking computer printout like the one I just got in the mail. If you're a Los Angeles listener, this one's for you. It's got LAPD, LA County Fire, LA Airport and more. I'm in hog heaven! And hey, if you're in the LA area, don't worry about LAPD going digital, you've still got a few years.

154.8300--LAPD Tac 1
154.7700--LAPD Tac 2
154.9950--LAPD Tac 3
506.5875--LAPD Rover 4 (Central)
507.2625--LAPD Rover 5 (Valley)
506.8125--LAPD Rover 6 (West)
507.0375--LAPD Rover 7 (South)
507.0875--LAPD Rover 8 (Emergency)
506.8375--LAPD Metro and SWAT
453.1000--LAPD Tac 5
506.8875--LAPD Devonshire / West Valley
506.7125--LAPD Van Nuys
507.1625--LAPD Foothill / North Hollywood
154.7550--LAPD Burglary - Auto Detail
861.7625--LAPD Parking and Traffic (Trunked)
862.7625--LAPD Parking and Traffic (Trunked)
863.7625--LAPD Parking and Traffic (Trunked)
864.7625--LAPD Parking and Traffic (Trunked)
865.7625--LAPD Parking and Traffic (Trunked)
122.7500--LAPD Helicopter AM
123.0250--LAPD Helicopter AM
858.4375--LAFD Dispatch: Valley
42.82000--CHP "Orange" Mobile (Glendale / West Valley)
42.50000--CHP "Orange" Base (Glendale / West Valley)
158.7900--Police Intersystem, So. Cal. Net
47.86000--LADWP Power
48.42000--ADWP Water
464.4750--Valley Cable
460.9000--Wells Fargo Alarms
453.2500--L.A. Animal Reg. / Street Lights
48.44000--Metropolitan Water District
48.54000--Metropolitan Water District
453.9000--L.A County Parks
453.8250--L.A Building Security
153.8000--L.A City General Services
42.82000--CHP "Tan" Mobile
42.42000--CHP "Tan" Base
42.34000--CHP "Blue" Sigalerts
154.4000--LACoFD "Antelope"
154.2800--LACoFD White 6 (Mutual Aid)
470.5125--LACoFD Blue 4 (Admin. & Command)
470.6125--LACoFD Blue 8 (Admin. & Command)
470.6375--LACoFD Blue 9 (Tac. North)
470.3625--LACoFD Blue 10 (Tac. North)
470.6375--LACoFD Blue 11 (Dispatch & Tac.: Malibu, Antelope)
118.9500--LACoFD Helicopters
39.98000--AQMD Smog Reports
37.22000--AQMD
119.3000--Van Nuys Tower East
120.2000--Van Nuys Tower West
126.6000--Van Nuys Helicopter Control
118.7000--Burbank Tower
120.4000--Burbank Approach North
124.6000--Burbank Approach South
134.2000--Burbank Approach Southwest
125.8000--Center Newhall Sector
124.5000--LAX Approach (North & West)
124.9000--LAX Approach (East & South)
124.3000--LAX Departure
125.2000--LAX Departure
133.9000--LAX Tower (Runway 6-24)
132.6000--Center Ojai Sector
133.0500--Center Bakersfield Sector High
132.5000--Inyokern Sector
127.1000--Center Arvin Sector: North
128.2000--Center Azusa Sector: East
128.3000--Center Pacific Sector High
132.1500--Center Pacific Sector High

Our buddy Lou Evans recently spent some time basking in the sun at the Toshiba Tennis Classic held at the La Costa Resort and Spa in La Costa, California. "The weather was great and the scanning was even better. I logged numerous frequencies related to the World Tennis

Association. Security wasn't as tight as it should have been, but there were lots of personnel around, most with radios."

43.0000--La Costa Resort & Spa Ops
154.5700--La Costa Resort & Spa Alarms
154.6000--La Costa Resort & Spa Ops
151.8650--La Costa Resort & Spa Ops
463.5000--La Costa Resort & Spa Ops
464.4750--La Costa Resort & Spa Hotel Ops
464.6250--World Tennis Association
464.7250--La Costa Resort & Spa Hotel Ops
464.7750--La Costa Resort & Spa Hotel Ops
466.2250--World Tennis Association
468.8125--World Tennis Association Discrete
469.5500--World Tennis Association Ch.4
469.6000--World Tennis Association Ch.6
469.6500--World Tennis Association
469.7750--World Tennis Association

Dick Davison (CA 6 TAD) has traveled to Yosemite National Park, west of San Francisco, for years. He told us that the spot is so popular lately that closures have resulted. "If you're going, call ahead to check on closures. And pop these frequencies into your scanner, they can help make sense of what's going on."

147.000--Yosemite Amateur Radio Repeater
172.650--Yosemite Park Rangers Local
171.650--Yosemite Park Rangers Mt. Hoffman
168.350--National Park Service Rangers
171.800--Yosemite Valley Floor
170.000--Yosemite Tactical
155.160--Mountain Rescue Association
155.220--National Ski Patrol
156.075--CALCORD
154.920--CLEMARS
154.935--CLEMARS

WASHINGTON by Steve Sullivan

While riding the ferry the other day, I began to think about frequencies (don't we always end up musing about radio?) Here's what I came up with once I'd gotten back on land and hit the frequency books. If you can add to this list, don't hesitate to write. I'll print what you send.

151.040--Snoqualmie Pass DOT
151.104--Bainbridge Ferry
156.970--San Juan Island Ferries

Boy, do we love new members! Vern Lightbody in Spokane wrote to say that he just began subscribing to NatScan. "I'm very interested in acquiring the frequencies in the Pacific Northwest area. As I travel, I collect the local frequencies for the area that I'm visiting. As I get new information, I'll forward a copy to you." Well, bless your heart, Vern, we'll take them! Here's the very latest from Vern for Spokane Police (SPD), Fire (SFD), Sheriff (SSO) Washington State Patrol (WSP) and more.

159.090--SPD Northside
159.210--SPD Southside
159.030--SPD Unit to Unit
159.150--SPD Data
155.130--SSO Dispatch and Patrol
153.815--SSO Ch 5 Tac 1
154.740--SSO Tac 2
155.625--SSO Ch 5
154.775--SSO Ch 6 Tac 3
154.785--SSO Ch 7 Tac 4
154.800--SSO Phone Patch
155.580--WSP Spokane Patrol
154.845--WSP West Patrol
155.970--WSP Unit to Unit and A/C
159.075--WSP Aircraft
155.730--LERN
155.310--Pend O'Reille Sheriff
153.965--Stevens Sheriff
155.475--Stevens Sheriff Unit to Unit
155.880--Cheney PD
156.000--Spokane Indian Tribal PD
154.430--SFD Dispatch
154.130--SFD Ops
154.160--SFD Medics
154.190--County Fire District 9, 11, 12, 1
154.370--County Fire District 6
154.340--County Fire D-9 Yellow
154.220--County Fire D-9 Green
154.250--County Fire District 8, 10
154.295--Valley Fire
154.280--County Fire District 3, 4
155.880--Cheney Fire
154.220--Fire Mutual Aid
151.415--DNR Fire
159.240--DNR Fire
151.265--DNR Fire
159.420--DNR Fire
155.175--Lifefleet Ambulance
155.295--Lifebird
463.100--Heartflight
155.340--HEARS

The mailbox overfloweth this time around. A delightful letter was passed on to me, it comes from Robert Smith (BC 7 AAB) up in Nanaimo, British Columbia. "I use a PRO-2004 with a Grove Scanner Beam hooked up to an in-line coax amplifier which helps me pull in many stations from Northwestern Washington." Great list, Robert, thank you!

155.580--WSP Seattle Dispatch
154.680--WSP South Seattle Dispatch
154.460--WSP Seattle Car to Car
460.325--King County Sheriff (KCSO) North Dispatch
460.450--KCSO Southeast Dispatch
460.275--KCSO Data Requests
460.500--KCSO Tac 1
460.550--KCSO Tac 2
460.200--KCSO Tac/Car to Car "County"
155.190--KCSO Mutual Aid
154.965--KCSO Special Ops/Marine Units
153.775--KCSO Pagers
155.430--King County Medical Examiner/Animal Control
154.250--King County Fire Countywide Dispatch
155.640--Pierce County Sheriff West
154.890--Pierce County Fire Dispatch
155.520--WSP Tacoma West 154.740 WSP Tacoma East
453.325--Whatcom County Sheriff UHF Dispatch
155.610--Whatcom County Fire (WCFD) "Fire 1"
154.220--WCFD "Fire 2"
154.325--WCFD "Fire 3"
453.225--Bellingham City Police Dispatch

154.340--Bellingham City Fire Dispatch
155.025--Lynnwood/Edmonds Police "Snocom F-1"
155.820--Lynnwood/Edmonds Police Tactical "Snocom Tac 2"
154.010--Fire F-1 154.325 Fire "Tac 2"

OREGON by Sue Duncan

You want a list? A real list? Well, have I got one for you. Take a look a this, see what you like, punch them up and enjoy the listening. It's donated to us by Fred Wasserman in Corvallis. We'll have more from Fred in the next issue.

42.8200--Oregon State
42.8600--Oregon State
42.8800--Oregon State
42.9200--Oregon State
42.9400--Oregon State
154.9350--Oregon State
155.4600--Oregon State
155.5050--Oregon State
156.2250--Oregon State
159.0300--Oregon State
159.1050--Oregon State
453.6600--Oregon State
458.6600--Oregon State
458.9600--Oregon State
460.3120--Oregon State
465.3120--Oregon State
465.5000--Oregon State
118.9250--AG Fire Operations
118.9500--AG Fire Operations
166.6750--Interagency Emergency Air F-1
168.5500--Interior Department/BLM
172.6000--Interior Department
166.7250--BLM F-1
166.7750--BLM F-2
168.2500--BLM F-3
168.4000--BLM F-4
167.1000--BLM F-6
169.7500--BLM F-7
36.7700--Forest Service Region 6
168.1750-- Forest Service Region 6
168.6750--Forest Service Region 6
41.2700--Interior Dept. Logistics
41.5500--Interior Dept. Logistics
46.6300--Interior Dept. Logistics
46.8100--Interior Dept. Logistics
46.9900--Interior Dept. Command
417.3000--Interior Dept. Command
417.3500--Interior Dept. Command
417.5000--Interior Dept. Command
417.8000--Interior Dept. Command
173.5870--Air National Guard Fire/Crash Crew
154.1750--Port of Portland
154.2800--Port of Portland
154.4300--Port of Portland

"At the Hillsboro air show in July, I was able to copy the Blue Angels on 307.7 during their show," writes Al Gillis. "This appeared to be the leader of the diamond formation calling the timing of their events. I was never able to hear the two solo craft talking (although I think I had them on 307.7 from time to time). I had numerous freqs being scanned by my Yupi 7100 but didn't hear anything but the tower on VHF and UHF and the acts being staged and called in. The Angels communications was very terse - no wasted words. It was kind of interesting to hear that they didn't have a lot of chatter going on during the shows. Those Navy pilots are good!"

Dale McMahon also caught the Blues at Hillsboro. "I used an AOR AR-2500, Realistic PRO-34 and PRO-60 and a Uniden Bearcat BC8500XLT with each receiver set to capture a specific group of frequencies and one to scan known frequencies." Dale said this method worked well for him. He confirms 263.35 as Diamond Formation, 275.35 for Soloists and 307.7 for Show Center. Portland-Hillsboro Airport (HIO) uses 119.3 Tower, 121.7, Ground, 239.3 Military Tower, 239.3 Military Ground. Following is my own up to date listing of Blues frequencies, compiled over several years of listening.

121.9000--Ground Support
123.4000--Common Control
141.5600--Maintenance Charlie
142.0000--Maintenance Alpha
142.0250--Maintenance Delta
143.0000--Maintenance Bravo
143.6000--Maintenance
241.4000--Air-to-Air
243.0000--Emergency
245.9000--Air-to-Air
246.4000--Air-to-Air
250.8000--Air-to-Air
318.9000--Air-to-Air
345.9000--Air-to-Air
348.6000--Ground Support
360.4000--Soloists
362.6000--Show Control
382.5000--Air-to-Air
384.4000--Air-to-Air
391.1000--Air-to-Air
391.9000--Air-to-Air
395.5000--Air-to-Air
395.9000--Air-to-Air
251.6000--Aircraft 5 and 6 Preset 8
251.8000--Preset 19
263.3500--Flight Line Common
263.5000--Air-to-Air
275.3500--Comm 1 Lead
302.1500--Comm 3 Solos
307.7000--Comm 2 Formation and Comm 3 Solos

NEVADA by Bill Martin

The Groom Lake area is one of the most popular monitoring targets in the state. Our list of frequencies grows monthly as more scanner monitors visit and send in what they've heard. If you're a first-timer, here's a quick rundown on what you should be tuned to. Many viewing areas have been reclaimed by the military, but you should still be able to find a spot.

142.200--Groom Lake Security
141.550--Groom Lake Security back channel
409.025--Groom Lake Base
167.700--Groom Lake - use unknown
252.400--Project Skunkworks air to ground
283.700--Project Skunkworks A/G
349.300--Project Skunkworks A/G
246.100--Project Skunkworks A/G
407.500--Flight line
407.400--Flight line
238.300--554th Range Group
259.400--554th Range Group
268.200--554th Range Group
253.400--Dreamland
255.800--Dreamland
261.100--Dreamland
392.100--Dreamland
389.100--Dreamland
376.200--Dreamland AWACS (Darkstar)
496.250--Ground Intrusion Sensors
496.275--Ground Intrusion Sensors
496.300--Ground Intrusion Sensors

Walter Lafferty says, "we get so many scanner listeners that come to this area as tourists and don't know what to listen to that I decided to send in the hot numbers for the strip." Thanks, Walter! Here's what you should have in

your scan bank if you're visiting and want to hear the good stuff.

159.090--LVMPD SE Patrol - Center and South Strip area
158.970--LVMPD SW Patrol
158.745--LVMPD NE Patrol - Downtown
159.030--LVMPD NW Patrol
453.150--LVFD Downtown/east of I-15
453.100--Clark Co FD Western Co/South Strip/W of Maryland Pkwy
453.700--Clark Co FD Eastern Co/E of Maryland Pkwy
453.400--LVFD W and N Las Vegas/West of I-15
132.400--McCarran Airport ATIS Arrivals
125.600--McCarran Airport ATIS Departure
119.900--McCarran Airport Tower

ARIZONA by David Watson

Reader Mark Harvey in Phoenix sent in a great letter recently. Mark tells us that the Arizona Highway Patrol (DPS) uses geographic districts. "For instance, Districts 5, 7, 13, 14, 11 for the greater Phoenix area, District 8 for Tucson and so on. Inside these districts are Areas." Marks says that a typical APB call would sound like this: "Attention District 11 units, special attention Area 2 and Area 3 units." Phoenix areas are broken down as follows:

460.325--Metro East Districts 5, 7 <motors>, 13
460.300--Metro West District 14
460.475--Beeline Highway District 11
460.025--Casa Grande, Apache Junction District 6
460.425--Prescott District 12
460.425--Tucson District 8

"You'll find EMSCOM statewide hospital patches and S&R Ranger helicopter dispatch on 463.100/468.100 MHz. There are two state tacticals, 154.935 and 460.225." Thanks for the nice update, Mark! What's going on in your area? I'll take frequencies, unit numbering, beat areas, whatever you know we want to pass on!

If you've ever been stuck in rush hour traffic, you know that there is a need to keep up with traffic reports. In the Phoenix area, Sky View Traffic are the folks to listen to. Sky View provides traffic reports to more than twenty-five commercial AM and FM radio stations around the area. Their air to ground frequency is 450.6875, while 450.2375 carries two-way talk. Skyview chats with KOY Radio on 450.5875, KNIX Radio on 450.4875, KTAR Radio on 455.7000 (F1 North repeater) and 455.8000 (F2 South repeater).

UTAH by Leo Russell

Numbers this month come from Dennis Sanchez, who listens to a PRO-37 and BC-700A. "The Navaho Tribe in Mexican Hat can be heard using 45.440, 46.560, 46.520, 153.845, 153.980, 154.710, 154.980, 155.760, 155.820, 453.700. Police are using 46.020 and 155.625. The Ute Tribe over in Vernal/Ft. Duchesne have frequencies allocated at 154.980, 452.725, 154.725, and 155.415. I hear Ute Search and Rescue occasionally on 155.160, which is a nationwide SAR freq."

IDAHO by Barry Jones

Our Washington editor passed along a letter from Vern Lightbody. Vern's in Spokane, but he gets over to Idaho often enough to have collected a nice list that he's sharing with us. Thanks, Vern!

156.030--Lincoln Sheriff
460.050--Sandpoint PD
460.100--ISP Dispatch
460.200--ISP Dispatch
460.125--ISP Sandpoint Dispatch
460.300--ISP CDA Area
460.150--Kootenai Sheriff
460.250--Benawah Sheriff
460.275--ISP Unit to Unit
460.400--Post Falls PD
450.450--Coeur d'Alene PD
460.500--Bonner Sheriff
156.000--Ferry County Sheriff
156.190--Whitman County Sheriff
155.940--Adams County Sheriff
155.700--Grant County Sheriff
155.910--Franklin County Sheriff
155.670--Benton County Sheriff
460.300--Sandpoint PD
154.370--Kootenai City FD
154.445--Post Falls FD
154.415--Athol/Hayden Lake FD
154.130--CDA Fire
155.805--Kootenai City Paramedics
155.220--Kootenai City Ambulance

COLORADO (Column Open)

NatScan bids farewell to Boulder Assistant Fire Chief Clifford Harvey, who retired after 27 years as a member of the Boulder Fire Department.

Three 800 MHz systems are filling up scanners in the Metro Denver and Denver City/County areas. Even the University of Colorado at Denver has gotten in on the act. The UC Denver system is a Motorola SmartNetII, while Denver is using GE EDACS systems. Here are the numbers to feed your hungry scanner.

DENVER METRO

Repeater		Input	
R-1	866.4875	M-1	821.4875
R-2	867.4875	M-2	822.4875
R-3	868.4875	M-3	823.4875
R-4	866.9875	M-4	821.9875
R-5	867.9875	M-5	822.9875

DENVER CITY/COUNTY POLICE AND FIRE

Repeater		Input
R-01	854.9875	809.9875
R-02	855.4875	810.4875
R-03	855.9875	810.9875
R-04	856.4875	811.4875
R-05	857.2375	812.2375
R-06	857.7375	812.7375
R-07	858.4875	813.4875
R-08	859.2375	814.2375
R-09	859.7375	814.7375
R-10	860.4875	815.4875
R-11	855.2375	810.2375

R-12	855.7375	810.7375	
R-13	856.2375	811.2375	
R-14	856.7375	811.7375	
R-15	857.4875	812.4875	
R-16	858.2375	813.2375	
R-17	858.7375	813.7375	
R-18	859.4875	814.4875	
F-19	860.2375	815.2375	R2R-1
F-20	860.7375	815.7375	R2R-2

UNIVERSITY OF COLORADO AT DENVER
T-1 868.4625
T-2 867.9625
T-3 867.4625
T-4 866.9625
T-5 866.4625

NEW MEXICO by Scott Williams

This time around we received a great letter from an anonymous source reporting new information for the state. "All NM government license plates have recently been changed statewide. The new plates are white background, red numbers and start with the letter "G" in red. The plates have the word County or Municipality above it. The NM State Police seem to have kept their old plate style.

"154.665 is F-1 for New Mexico Livestock Inspectors statewide. The main office is located in Albuquerque. This radio system seems to be simplex or car to car only for that area. An inspector told me that his radio is only good in the Albuquerque area. These Inspectors are certified police officers and must go to the police academy in Santa Fe. The Inspectors can make arrests and carry firearms. Inspectors working outside of Albuquerque use NMSP freqs 155.550 F2 Cars and 155.370 F-3 LEN Car/Base. F-3 is used by all other agencies for communication to State Police offices via mountaintop control links. When listening to F-3 both freqs must be put into a scanner. The PL tone is 127.3 for most all NM police agencies. Some inspectors use local sheriff's radio channels in remote areas. I believe inspector unit numbers are in the 800 series. They drive brown or tan colored pickups with small red lights in the grill and red light on the backs of the truck racks.

"153.875 is F-1 receive and F-2 transmit/receive for NM State Park Rangers. The F-1 transmit is 151.430 to Santa Fe HQ. I have found that Rangers also have local Sheriff's channels in their radios as well as 156.800 Marine Channel 16 for use when at NM State Park Lakes. The CTCSS tones for F-1 and F-2 is 114.8.

"164.625 is F-1 receive and F-2 transmit/receive for Fish and Wildlife. F-1 transmit is 163.150 and seems to be licensed statewide. 166.5625 is F-1 receive and F-2 transmit/recieve for USDA Animal Damage Control. F-1 transmit is 164.125. They also use 170.0 F-8 for ground to air communications. This agency also uses FWS freqs. ADC mainly uses light fixed wing aircraft for coyote control."

We appreciate the input! Don't forget, if you wish to remain anonymous, simply say so, we're happy to oblige.

NORTH AND SOUTH DAKOTA by Walt Clancy

We conclude Matt Schar's (IA 0 AAL) list for the Sioux Falls area this issue. Matt tells us that these are the frequencies that take up residence in his scanner: Local Government 46.520, 150.995, 154.965, 155.760, 158.745, 159.285, 453.725, 453.825; Aircraft 109.9, 111.1, 115.0, 118.3, 121.9, 122.8, 122.95, 125.8, 126.6, 126.9, 129.3, 130.1, 130.55, 130.75, 131.225, 131.250, 131.55, 131.8, 132.1, 135.45. By the way, the Sioux Empire Fair is on 461.6 and the South Dakota Gold Association is on 469.5.

HAWAII by Laura Quarantiello (Open)

Monitoring satellites is an arcane and not altogether weird habit, but David Williams in Oahu has it bad. "I don't know if this is quite up your alley, but here is my list of satellite frequencies. Many are audible on even the most basic of scanners," he says. We'll print half of his list this issue, and save the other half for next time.

TRANSIT 5BN 5--136.650
ATS 1--137.350
ATS 3--136.370,137.350
NOAA 1--137.620
LANDSAT 1--137.860
NOAA 2--137.500
OSCAR 20 (NAV)--150.000,400.000
NOAA 3--137.620
NOAA 4--137.500
AO 7--29.502,145.975,435.100
LANDSAT 2--137.860
GOES 1--136.380
MARISAT 1--248.850-249.350 25kHz steps 21 channels
LES 9--249.350-249.850 25kHz steps 21 channels
MARISAT 2--248.850-249.350 25kHz steps 21 channels
NOAA 5--137.620,137.770
MARISAT 3--248.850-249.350 25kHz steps 21 channels
GOES 2--136.380
IUE--136.860
LANDSAT 3--137.860
GOES 3--136.380,137.190
TIROS-N--137.620
GOES 4--136.380
NOAA 6--137.500,136.770
NNSS 30480--149.9875,399.9875
GOES 5--136.380
METEOSAT 2--137.078
NOAA 7--137.620,137.770
MARECS A--137.170
LANDSAT 4--137.860
NOAA 8--137.500
GOES 6--136.860
COSMOS 1500--137.400
LANDSAT 5--137.860
UOSAT 2--145.825
USA 5/NAVSTAR 10--1575.420,1227.600
MARECS B2--137.170
NOAA 9--137.620,137.770
GEOSAT--150.0125
NNSS 30300--149.9875,399.9875
NNSS 30240--149.9875,399.9875
USA 10/NAVSTAR 11-- 1575.420,1227.600
METEOR 3--137.850
JAS 1--435.795

NOAA 10–137.500,136.770
MOS 1A–136.110
RS 10/11–29.357,29.403,29.407,29.453
METEOR 2-16 –137.400

ALASKA (column open)

"Since I haven't seen too much published about Alaska I'm sending some of the frequencies that I monitor the most," says Jose E. Torres III. "I hope it helps some of the scannists from Alaska and at the same time I would like to encourage them to send in whatever frequencies they know of. I predict, according to the increase in crime, that every day ther'es more and more to monitor. Although I'm not too happy nor proud about crime, at least I know that it is still safer to sit at home and listen."

Public Safety: 860.7125, 859.7125, 859.2125, 858.7125, 858.2125, 857.7125, 857.2125, 856.7125, 856.2125.

Anchorage Police: 460.075 CH1, 460.125 CH.2, 460.175 CH.3, 460.250 CH.4, 460.300 CH.5, 460.375 CH.6, 460.475 CH.7, 460.500 CH.8

State Troopers: 154.740, 154.785, 155.250, 155.370, 155.415, 155.790, 161.010, 161.130.

Fire, EMS, Rescue: 154.130, 154.175, 154.250, 154,295, 154.430, 154.445, 155.160 EMS, 155.325 Medevac.

From the Bearcat Radio Club & National Scanning

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1. NatScan's got a new editor. Who is he?

2. Which antenna drastically reduced an overload problem on an ICOM R1?

3. LAPD officers are now issued what type of radios?

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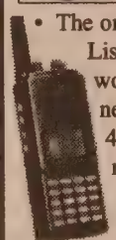

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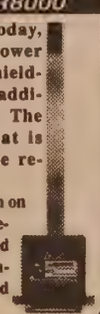

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Studio Link or Cable Leakage?

A*S*K the EXPERTS

Q: I recently found wide FM (WFM) audio of our local PBS station at 61.75 MHz. I wrote the station engineer, who couldn't confirm it as a studio link and said I may have picked up leakage from my cable company. Is that common?
-- Kevin F. Berrien
Chicopee, Massachusetts

A: Sometimes I worry about station engineers. Sounds like you're actually picking up the fringes of 65.75 MHz, which is the wideband audio portion of the television broadcast. The other portions are color on 64.83 and picture on 61.25 MHz.

Q: Can you explain the new digital cellular modes and tell me if they will make scanning cell phones obsolete?
-- Anonymous
Dedham, Massachusetts

A: Digital cellular can already be found in many areas. It's technical name is TDMA or Time Division Multiple Access and it works by digitizing, then multiplexing three conversations into the space of one conventional analog cellular channel. CDMA or Code Division Multiple Access is in the testing stages and uses direct sequence spread spectrum to place hundreds of users on each channel. Pretty nice, eh? No, you won't be able to listen to these signals, but then you're not supposed to be doing that anyway, right?

Q: What frequencies are common to most air shows?
-- Richard Osburn
Seattle, Washington

A: You can usually expect to hear these frequencies active: 122.75, 122.85, 122.900, 122.925, 123.45, 123.10, 151.625, 154.540 and 154.570. Search the 121--124 MHz range, as well. Don't forget airport frequencies for the field where the event is being held.

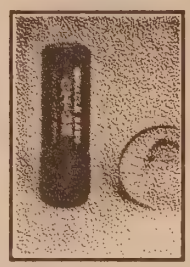
Q: Can you tell me the headset/extender frequency that California Highway Patrol motor officers use? I noticed a duck antenna mounted on the center front part of motorcycle dash just inside the windshield. Also, what am I hearing from CHP on 900 MHz?
-- Bill Anderson
Santa Ana, California

A: 154.905 MHz is the universal CHP extender freq, used by all officers. The 900 MHz frequencies you discovered are uplinks and downlinks to and from hilltop transceivers and dispatch centers. According to our California editor, Zack Benjamin, these freqs are low powered and you must be very close to hear them.
Santa Ana: Modjeska Peak
954.700/958.300 MHz
Sierra Peak 954.500/958.100
Yucca Valley 956.650/953.050

Q: I understand that by using certain keystrokes, it's possible to turn a Motorola cellular flip-phone into a scanner. Is this true?
-- Dan Terwand
East Rutherford, New Jersey

A: Apparently, by activating the test mode of the phone you can receive or transmit on the cellular channel of your choice. This is quite different from actual scanning, but does allow you to monitor other frequencies, turning the phone into a hybrid scanner of sorts. Of course, monitoring cell phones is illegal.

Q: I'm looking for a good antenna for my ICOM R1, but I don't want to overload the unit. What can I use?
-- Hank Collins
Davis, California



A: The R1 is very sensitive, so a high gain antenna will definitely overload the unit. Instead, I'd recommend that you get a stubby duck antenna. Antennas like this reduce signals and help counter overload. One user found that replacing the factory antenna with a Miracle Baby Micro Duck antenna drastically reduced the overload problem.

Q: Can you help me identify a designator I'm hearing on the military air band? Northern Lights is the call sign and they seem to be directing aircraft.
-- Scott Adams
Teaneck, New Jersey

A: You've come across a NORAD (North American Air Defense) station. Northern Lights and Huntress are northeastern air defense sector calls. Others you may hear in other parts of the country are Dragnet, Chalice, and Darkstar. These calls are often followed by a phonetic letter (such as Dragnet Victor or Chalice Bravo) that is used to differentiate between aircraft from the same squadron.

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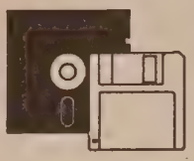
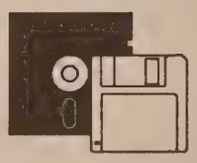


Mr. Scanner's Down & Dirty Disk Program

Same format as Mr. Scanner's Frequency Lists on Disk, except this is a raw dump of the entire FCC database from 25 MHz to 1.3 GHz for a state. Not only includes public safety, but business, taxi cabs, railroads, news media, etc.

Mr. Scanner's Down & Dirty Disk.....$35.00
Additional States..... $15.00 each
Shipping..... Included



Mr. Scanner's Frequency List on Disk

This is a computer frequency management program that comes with a database for the State or Province of your choice. Services covered include: Police, Fire, Ambulance, Rescue Squads & Hospitals, Local Government, Forestry Radio Service, Marine, Mobile Telephones, Aircraft and Amateur Radio. Program will accept entries for any other service. Can look up listings by city, licensee, name or frequency. Look up frequencies by limits (much like a search on a scanner). Print frequency list by county and service.

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BC 3000 XLT.....$356.00
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BC 220 XLT.....$225.00
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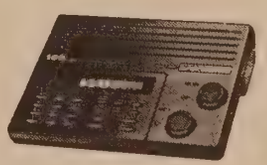

Model BC 860 XLT

100 channels. Coverage from 29 -54 MHz, 108 - 174 MHz, 406 - 512 MHz and 806 - 956 MHz (less Cellular Telephone Band). CELLULAR BAND CAN BE MONITORED ON THIS SCANNER WITHOUT MODIFICATION BETWEEN 895.010 AND 916.500 MHz. Dual conversion receiver with scan rate of 100 channels per second. Twin turbo feature lets you select either 100 or 300 steps per second when searching frequencies.

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Realistic PRO-2040 Desktop Scanner

Are you looking for a nice desktop scanner with a moderate number of channels, good sensitivity, and full frequency coverage? If so, the Radio Shack PRO-2040 may be the one for you.

The PRO-2040 is made by Uniden for Radio Shack, and though the display may look like that found in such Uniden scanners as the BC-760XLT, the PRO-2040 improves upon many of the features of that series.

Measuring 2-3/4"H x 7-7/8"W x 7-3/4"D, the '2040 is a nice desktop size, not too large but not so small that the keypad is hard to use. The display is large and easy to read. The '2040 covers the following frequency ranges:

29.0–29.7 MHz–Amateur (10-meter band)
29.7–50.0 MHz–VHF-Low
50.0–54.0 MHz–Amateur (6-meter band)
108.0–136.975 MHz–Aircraft
137.0–144.0 MHz–Government
144.0–148.0 MHz–2-meter Amateur
148.0–174.0 MHz–Land Mobile and Government
406.0–420.0–Government
420.0–450.0 MHz–70-cm Amateur
450.0–470.0 MHz–Land Mobile
470.0–512.0 MHz–UHF television band
806.0–902.0 MHz–UHF Land Mobile
902.0–928.0 MHz–23-cm Amateur
928.0–956.0 MHz–UHF Land Mobile

Included with the PRO–2040 are an aluminum stick antenna, a BNC connector for an external antenna, a "wall wart" power pack which provides the necessary 12VDC, and the usual well-written Radio Shack manual. The cellular frequencies are deleted, and not restorable.

The PRO-2040 has 100 memory channels arranged in 10 banks of 10 channels, which allows you to arrange your programming in a variety of ways; I personally prefer programming by category (fire, police, railroad, air, and so on), but one could program by geographic area or by user, or any variation one desires. Accessing channel banks is standard; pressing the numbered button corresponding to the desired bank while in the scan mode enables or disables the bank. A small numeral 1 through 0 appears or disappears in the upper left of the display to indicate the bank status.

The scan rates of the PRO-2040 are a bit odd given the current Uniden propensity to go for light-speed rates only. The normal scan rate is a very slow 12 channels-per-second, while the hyperscan rate is 73 channels-per-second, which is quite good, but an odd choice. The PRO-2040 also has a 50 step-per-second slow limit search, which becomes 100 steps-per-second in fast mode, and jumps to 300 steps-per-second in the Hyper mode. Search hold is also included; by pressing the "limit" key when an active frequency is found, the scanner will stop until "limit" is pressed again. You may also use the up and down arrow keys to manually step through the search range while in Hold mode. In addition to limit search, the PRO-2040 includes direct search, which allows one to start searching directly, up or down, from any frequency stored in memory.

A very nice new feature is the birdie skip. All modern scanners generate internal signals which can stop the scanner during searches. With the birdie skip feature, up to 50 frequencies can be entered into the Skip memory,

By Tom Swisher

Things That Work

and the scanner will buzz right past them while searching. I tried this on some birdie-prone search bands and found it to work very well.

Like most recent Radio Shack scanners, the PRO-2040 has a temporary 10 channel monitor bank, which you can use to store frequencies located during search by simply pressing the "mon" key. You can also use the monitor channels to store special frequencies that you wish to be able to access quickly.

The PRO-2040 is quite sensitive, and reasonably selective; I only had minor trouble with intermodulation and other interference. The display backlight is excellent, although it is the usual bright orange color used by Uniden. A more muted, tasteful green color would be better, as it is easier to look at and not as distracting. The audio quality is also quite good, very crisp and clean, with sufficient power to be heard in slightly noisy environments.

Unlike some desktop scanners, the PRO-2040 runs off 12VDC. If you want to use it in your car or if you have 12VDC battery capability for emergencies, it will work well, although using the '2040 in the car would be a bit troublesome, as it has no provision for using a mounting bracket. The PRO-2040 also has selectable 2-second delay, individual channel lockout, selectable priority, and data skip. The data skip feature works reasonably well, but it takes a bit too long to take effect when a data signal is found, and did not work at all on trunking data channels.

Minor nitpicks notwithstanding, the PRO-2040 is a great desktop scanner, and would be a fine addition to any scannist's collection. The PRO-2040 lists for $249.99.

National Scanning
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Jim Sutton, Editor

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Norm Schrein, President
Peggy Libecap, VP Membership

Our cover: Mike Libecap poses as the suspect in the simulation of a high risk stop conducted by the Montgomery County, Ohio Sherriff's office.

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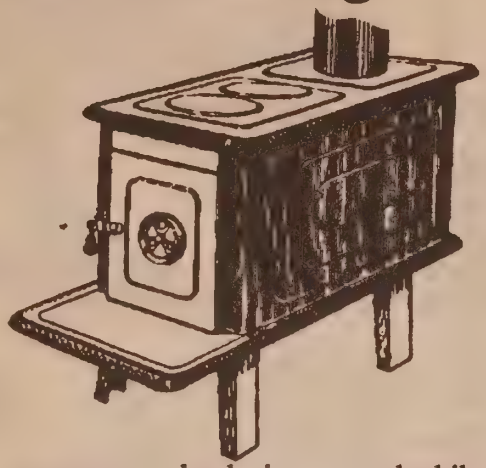

Well, it's getting to be that time of year in the northern part of the continent. Winter is fast approaching and it's the season of snow, ice and inclement weather. If you haven't already thought about it there are some preparations that will keep your scanner going and the information flowing, especially when a winter storm hits...

In addition to scanning your local police there are a few good sources for road information that will let you know what's going on in your city and surrounding communities. Your local and state snow removal jurisdiction frequencies are a must. Be it the highway department, road and bridge or streets department the name will implicate the fact that they are in charge of keeping your roads clear. These frequencies are usually listed as local and state government in most data bases and references. They are invaluable, especially if you have to travel.

Another good source is the local traffic reporters, be it metro traffic or an independent. Adding these frequencies to a severe weather bank is helpful. Also, in many areas, amateur radio operators who are members of Skywarn usually will have a dedicated 2 meter (144--148 MHz) band repeater that may have valuable information from weather spotters. This group is supplying the information to the National Weather Service and you'll have it up front and personal in times of severe storms.

The last source that can be relied on for information is your local power company's dispatch and operations frequencies, especially during a power outage! Most of the frequencies can be found in a good frequency directory, as well as right here in the pages of NatScan. Gathering these frequencies and loading them into an emergency bank is a worthwhile project for a winter afternoon that may pay off before you know it.

While we're on the subject of winter, power failures can be one of the most frustrating events that an unprepared scanning enthusiast can experience. Are you prepared for it? Here's a few things that you can do to be ready when the lights go out.

First and foremost is emergency power. If you have a fully charged handheld scanner, you're ahead of the game. I have two fully charged scanners that take the same nicad AA batteries. Although the battery packs for my PRO-34 and PRO-43 are different the batteries and power requirements are the same. This gives me twice the scanning time. I also keep a fresh emergency set of alkaline AA batteries in a spare battery holder for each scanner. If you have a Radio Shack handheld, the battery packs are available as special order items. By keeping these ready I'm assured of approximately 24 hours of emergency scanning with the available power.

For those who want to be further prepared for long power failures, I suggest emergency measures of longer proportions. For those with base or mobile units that use 12 volts a good backup is a 12 volt automotive battery. These, however, require extreme caution if they are not the sealed variety. You also must be alert as to the polarity of the connections to your scanner. Those with small plugs will usually show the polarity on the socket. Reversing the polarity will undoubtedly render most scanners useless and in need of a trip to the repair shop. A better alternative is a commercially produced backup system. The Power Station (see Sept./Oct. NatScan p. 56) is one of these types of units. These units are ready to use with many available power levels, not just 12 volts. With many power levels and plugs included this unit can power hand held scanners that usually have 9 volt power requirements. They supply enough power for days of scanning as opposed to hours!

When the lights go out have your memory banks memorized or documented! This allows instant access to the frequencies where the action and information will be. Along with power for your scanner, emergency lighting is something that your entire family will appreciate. Having flashlights, electric lanterns and plenty of spare batteries on hand BEFORE the weather strikes is a good idea.

Preparing for emergencies and severe weather will allow you to hear all the action and avoid being frustrated with not only the weather but a powerless scanner! Hopefully you won't need to use your backup power and frequency banks, but with Old Man Winter one can never be sure!

Simple Scanning *Projects*

By Wayne Heinen
N0POH

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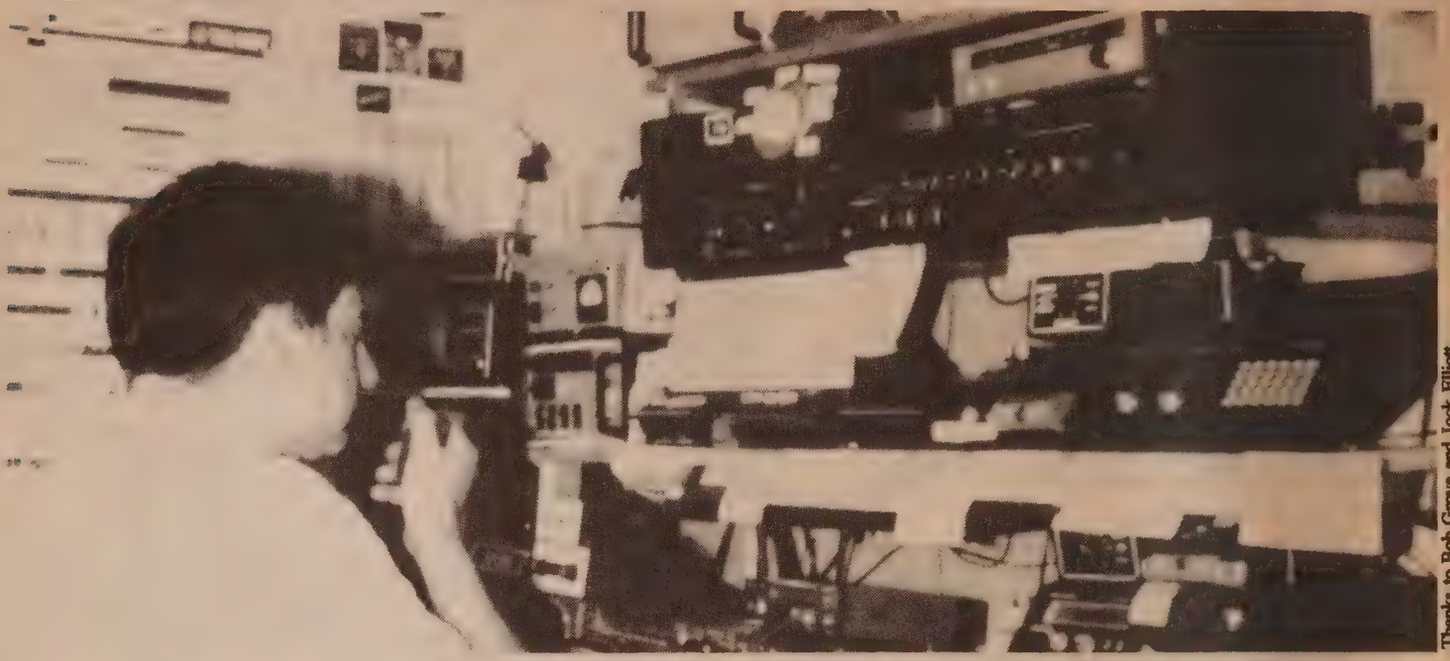

Thanks to Bob Grove and Jock Elliott.

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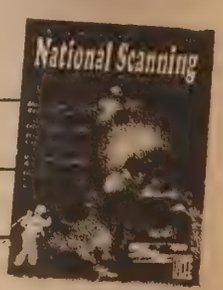

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Mod House

BY STEVE DONNELL WA1YKL

Building and Using the SCA-1 Kit

The SCA-1 subcarrier decoder kit is a great way to explore the hidden world of the many different types of subcarrier signals that exist on FM broadcast and the audio portion of television transmissions.

On FM broadcast signals, these subcarriers are usually referred to as SCAs (Subsidiary Communications Authorization). SCA's are a secondary audio program that typically consist of commercial-free background music, used in restaurants, stores and elevators. SCA programming can also be different types of instructional/information programs such as: "talking books" for the blind or language tutoring. A different type of SCA transmits digital paging and sports score data. While many people are familiar with SCA's on FM Broadcast transmissions, most do not realize that some very similar programming also exists on the audio portion of a television transmission. This is a service that you may have previously heard of called: SAP (Secondary Audio Program). SAP's can be listened to without any special decoders, on any television set equipped to receive stereo format audio. But for the rest of us that do not (yet) have one of these newer model TVs, the SCA-1 will work just fine. SAP's often are used as a way to send bilingual TV audio. But they can also do a lot more: One PBS station in my area uses their SAP to transmit a "talking book" service. Another station out of Boston (re)transmits BBC World Service radio programming. A relatively new type of use for SAP's is a service for the blind that gives a verbal description of the general visual scene and movement of actors as shown on the screen of the TV.

Still, a much more (potentially) interesting type of subcarrier found on some TV audio signals is a service called Pro Channel. This is an extra audio channel exclusively for use by a given TV station. Pro Channel can be used for transmitting audio or digital type signals. One common use for Pro Channel is as an easy way to send cuing directions to news reporters, particularly for use during any kind of live remote, doing interviews or compiling a story away from the studio.

The SCA-1 subcarrier decoder kit

Monitoring a Pro Channel will permit you to hear a news producer give "real time" directions to reporters doing live interviews, providing you with an even more close up view of how the Evening News is put together. Sometimes the microphone used to transmit directions on the Pro Channel is left switched on or "hot", this may provide the listener with an end-to-end view of what happens in the production control room during a news program. It's interesting to note that some FM broadcasters have been known to use SCA subcarriers for the same purpose.

How FM Subcarriers Work

The audio portion of an FM broadcast or TV audio program is comprised of various frequencies up to 15 KHz, which is used to frequency modulate the radio carrier signal. An FM broadcast SCA subcarrier consists of a 57--95 KHz "tone" that modulates the radio carrier as well. You can't hear the subcarrier because the audio circuits of an FM broadcast receiver filter it out. Also, frequencies above 20 KHz or so are considered to be "ultra-sonic," that is they are above the frequency range of human hearing. Most types of FM SCAs operate at frequencies of either 67 or 92 KHz. A television SAP subcarrier operates at 82 KHz. And a Pro-Channel subcarrier operates at 102 KHz. The subcarriers are themselves FM modulated with a completely separate audio program source.

Although very limited in it's effectiveness, here is a simple way that you can "trick" a scanner like a BC-9000 or PRO-2035 that can tune across the FM broadcast and television bands to find subcarriers on some local stations: Tune the scanner to a nearby FM station. Then reset the operating mode to NFM (Narrow FM) mode. Then use the manual tuning knob to move UP 65 KHz.You will still hear a good amount of "splatter" from the main audio program, but during any quiet passages in the main program you may be able to hear the audio from an SCA, if one is being transmitted, by that particular station.

You can also do the same thing in looking for any interesting SAPs on

These modifications, like many modifications, are experimental in nature. The publisher of this magazine does not test the accuracy of this material and therefore takes no responsibility with respect to the information contained herein. All questions and comments should be addressed to the author at Box 360, Wagontown, PA 19376.
Any modifications made to equipment are the sole and complete responsibilty of the owner. Modifications are not recommended by manufacturers and invalidate the terms of your warranty. Use of equipment must be in compliance with federal, state and local ordinance.

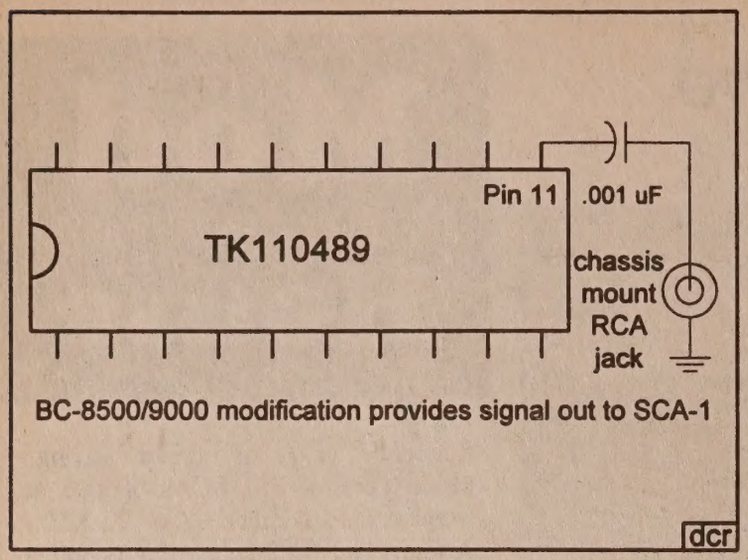


Diagram 1

the audio portion of a television broadcast, except that you will need to tune the scanner 80 or 85 KHz up from the audio portion of the given channel. Be sure the scanner is set to narrow FM mode.

Still a MUCH better way to explore listening to FM subcarriers is with the SCA-1 kit (available from DX Radio Supply for $27.95 plus 4.00 UPS, optional matching case 14.95, no extra shipping). Construction of the SCA-1 is easy. The SCA-1 includes a detailed step-by-step instruction book. It is recommended that you already possess at least a small amount of experience with soldering of electronic components and wires.

One trick that I have seen to be useful for people new to soldering is to first clean the wire leads of a component before installing it in the PC board. Scrape a hobby knife blade very lightly over the lead a few times. You do not need to get the lead perfectly clean. You can also try using a piece of Scotch Brite cleaning pad.

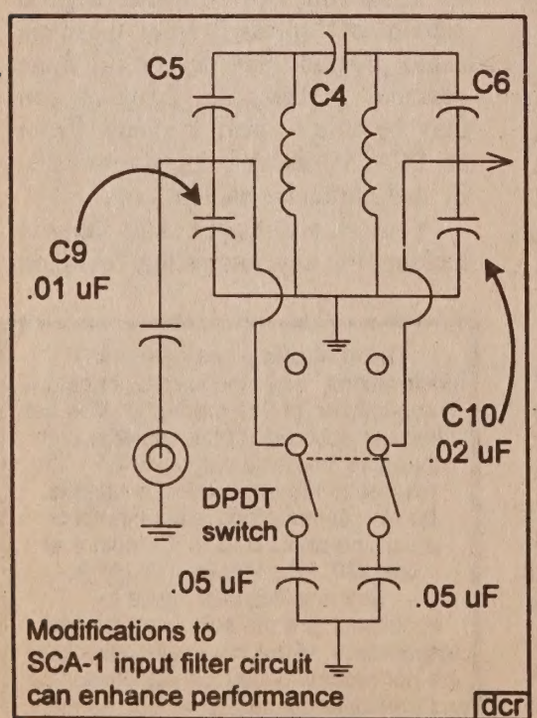


Diagram 2

Connecting the SCA-1 to Your Scanner

The SCA-1 can be used with any scanner that can receive FM broadcast and or television band signals. The only connections you need to make are to the output of the WFM (Wide FM detector) IC and to the scanner's ground. On the BC-8500 or BC-9000 the WFM detector output is on pin 11 of an IC with the number: TK110489. In the BC-8500, this is IC-12. In the BC-9000, this is IC-9.

With the Radio Shack PRO-2004, the WFM detector output is on pin 6 of IC-1, part number KB4419. In a PRO-2005 or 2006 the WFM detector output is on IC-1, pin 10. This would be a KA2243 or a HA12413 IC. It is highly recommended to have the service manual for these or any other scanners that you intend to work on. It will help make identifying these parts and their exact locations much easier.

One approach you may want to use to interface the WFM detector output of your scanner into the SCA-1 is with the circuit shown in Diagram 1. The use of the .001 uf capacitor prevents any possible damage to the WFM IC if the line going to the SCA-1 is accidentally shorted to ground. Mount the RCA jack through the rear panel of the scanner, on most scanners this will provide an easy ground as well. When you drill the hole for the connector, be sure to remove any metal fillings that fall into the scanner. Use a short piece of shielded cable with "RCA" type plugs on each end to connect between the scanner and the SCA-1.

There are also a couple of simple changes to the components of the SCA-1 that you may wish to undertake for improved operation. Reducing the value of resistor R3 to a 470 ohm will raise the SCA-1's tuning frequency range, necessary if you want to look for SAP and or Pro Channel signals. Changing the value of capacitor C12 to a .02 uf, will help reduce some background "hash" noise. Another change involves the signal input filter, in order for the filter to more easily pass subcarrier frequencies above 80 KHz. This involves changing capacitor C9 to a .01 uf and changing capacitor C10 to a .02 uf. Use a pair of .01 ufs in parallel if you have trouble finding any .02s. To use the SCA-1 on low frequency subcarriers, merely add a double pole switch that reconnects a pair of .05 uf (or .047 uf) back into the filter circuit between ground and the "hot" side of C9 and C10. See diagram 2.

In looking for various subcarriers, try checking signals from strong local stations first. Set your scanner to wide FM mode, and in looking for SAPs, be sure to tune to just the audio portion of a TV signal. Also remember that not all FM stations transmit an SCA and not all TV stations have SAPs or use a Pro Channel. It is VERY important to note that listening to SCA signals without the permission of the FM station transmitting them is illegal under the ECPA (Electronic Communications Privacy Act). Most SCAs are transmitted for reception only by those that purchase it as a "service", such as for use as background music in their place of business. It is perfectly fine to listen to television SAPs however.

AR 8000

The New Concept - AR8000 shocks the market. AOR made every effort to incorporate the latest technology in to this new scanner.

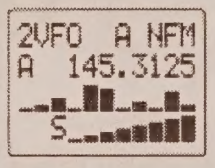
• SPECIFICATIONS •

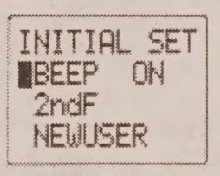
- **Range:** .5 - 1900MHz usable to 100kHz
- **Modes:** AM/NFM/WFM/USB/LSB/CW
- **Stepsize:** 50Mz to 999.995kHz
- **Sensitivity(μV):** 30 to 1000MHz
  SSB .2 **AM** 1.0 **NFM** .35 **WFM** 1.0
- **Filters:** (kHz) **SSB** 4 **AM/NFM** 12
  WFM 180
- **Memories:** 50 ch. x 20 banks=1000 total
- **Size/Wt.:** 6.1 x 2.8 x 1.6 inch.
  20 oz. batt. incl.

* Cell blocked for all, but Approved agencies.

- Covers .5-1900MHz*
- Ferrite Rod antenna below 2MHz
- Only portable scanner on U.S. market to have true SSB, both LSB & USB. Others attempt SSB using a BFO, but are difficult to tune and produce poor SSB audio.
- 4 level alpha numeric LCD read out frequency, mode, signal strength, band scope spectral display, battery low, remote and more
- Computer control up/down load data, will add a new dimension to the world of scanning.
- Clone your memory banks with a friend, load 1000 memory channels in seconds

.1 - 1900MHz*





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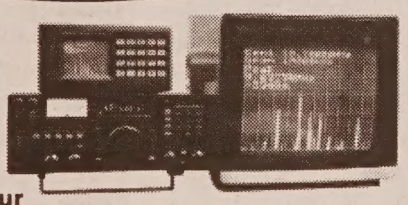
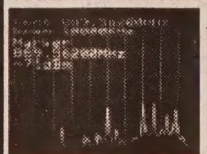


The Spectral Display Unit adds a new dimension to the signal interception hobby. Imagine seeing stations above and below your receiving frequency. Usually the transmissions are short, perhaps 1 or 2 seconds. What are the chances of you being tuned to the exact frequency at the instant of transmission? Very slim. With an SDU you can watch for stations to pop up over a 10MHz window, then zero in. The SDU 5000 offers features unheard of only a year ago.



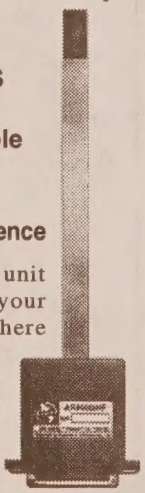
Δ Frequency coverage up to 10MHz Δ **Display** - 3.1" HQM Simple matrix color LCD Δ **Resolution:** 5 or 30kHz selectable Δ **Input:** 10.7MHz Δ 50dB Dynamic range Δ Screen refresh 2/s Δ Composite video out Δ Full computer control Δ Video output NTSC or Pal display, on TV or record on VCRΔ RS232 9600bps Δ Instant receiver set from cursor via RS232 Δ Store image on disc or your video recorder Δ Menu driven system makes SDU5000 simple to operate Δ SDU5000 is designed to work with the AR3000A (modified with a 10.7MHz output) using RS232 link with or without a computer. Other receivers with 10.7MHz IF output but digital linking may not be straight forward.

AR8000 Interface

Computer Interface for the AR8000

- Δ Low Power, powered by your serial port
- Δ No Drain on the batteries in the radio
- Δ Light weight, perfect for Laptop use
- Δ As small as a DB-25 Connector
- Δ Hi-Tech Surface mount design for reliability
- Δ 100% Shielded cable to receiver for reduced interference
- Δ PC Software included for Windows and DOS
- Δ Manual included
- Δ Detailed Programers documentation available
- Δ Designed and Manufactured in the USA
- Δ Optional 100% shield computer cable from AR8000INF to computer for reduced interference

Unlike some of the European devices sold today, this unit is smaller, lighter, and makes no power demands on your receiver. With the extra shielding and smaller size there is less chance of additional interference leaking into your radio. The AR8000INF is also the only interface that is upgradeable for use with the optional Tape recorder controller due first quarter '95.



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—Shows the frequencies being scanned as well as what type of service you are monitoring.

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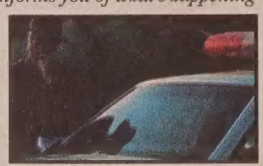

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